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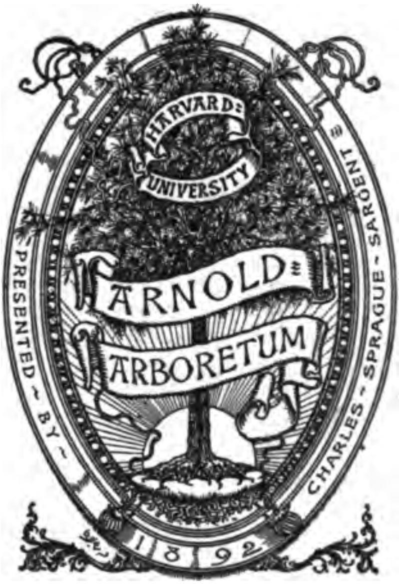
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THE

GARDENER'S MAGAZINE,

AND REGISTER OF RURAL & DOMESTIC IMPROVEMENT.
GARDENING
And
GARDENERS
FOR
VOL. X.
1834.

CONDUCTED

By J. C. LOUDON, F.L.S. H.S. &c.

AUTHOR OF THE ENCYCLOPÆDIAS OF GARDENING, OF AGRICULTURE, AND OF COTTAGE, FARM
AND VILLA ARCHITECTURE, AND EDITOR OF THE ENCYCLOPÆDIA OF PLANTS.

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PREFACE.

In this Tenth Volume we have complied with the unanimous request of our readers, and with the spirit of the times, in bringing out the *Gardener's Magazine* monthly and at a reduced price; and the success of this measure, we are happy to say, has fully answered our expectations.

The improvements which we contemplate in the succeeding Volumes are as follows: — 1. An occasional article to be headed *Pomological Notices*, or Notices of new Fruits deserving, or seeming to deserve, general cultivation; 2. *Olitorial Notices*, or Notices of new Culinary Vegetables, either originated in this country, or introduced from other countries, which seem to merit, or have been proved to deserve, general introduction in kitchen-gardens; and 3. *Arboricultural Notices*, or Notices of new species or varieties of hardy Trees or Shrubs, useful or ornamental, which merit a place in shrubberies or pleasure-grounds, as hedge plants, or in useful plantations.

To aid us in perfecting these Notices, the Council of the Horticultural Society of London have kindly granted us permission to apply, from time to time, for information, to their head gardener, Mr. Munro, and to their fruit-gardener, Mr. Thompson; and we have received the same indulgence from the Council of the Caledonian Horticultural Society, with reference to their head gardener, Mr. Barnet. We have directed the attention of all our foreign correspondents to these standing articles; and we earnestly request the assistance of the secretaries of all horticultural societies, of the curators of all botanic gardens, of all nurserymen, domestic and foreign, and, in short, of every gardener and amateur of gardening, in order that we may render them as complete as possible.

We intend, in future Numbers of this Magazine, to direct particularly the attention of our readers to the more general distribution of foreign hardy trees and shrubs in our pleasure-grounds and plantations. We cannot help regretting that the taste of amateurs should be so much absorbed in the acquisition of temporary novelties, chiefly of herbaceous flowering plants, or of plants requiring the protection of glass; while many trees and shrubs that have been long in the country, though they are as little known as if they had never been introduced, and which would contribute to the permanent ornament and improvement of country seats, are suffered to remain uncalled for in our nurseries. Thus, while considerable sums, all over the country, are given for a new florist's flower, a new variety of camellia, or a hybrid calceolaria, which require the most assiduous care and attention to prevent them from degenerating, and which are, perhaps, lost the year after they are received, those more noble objects, foreign hardy trees and shrubs, which are less expensive to purchase, require far less care in culture and management, and which, when once established, will increase every year in size and in beauty, and will remain useful and ornamental objects on an estate for generations, are comparatively neglected. Of a taste for fine flowers and a taste for fine trees and shrubs, it surely will not be denied that the latter is of a far more elevated kind than the former. It is more elevated, because it is more useful, more durable, and more influential on the general face of the country; and because it not only affords enjoyment to the possessor and the close observer, but to every one for whom landscape scenery has any attractions.

One reason why a taste for foreign trees and shrubs is not more common among country gentlemen is, the neglect of nurserymen to preserve and exhibit, in their nurseries, specimen trees of the more uncommon kinds, of eight or ten years' growth. Were this a general practice, the result could not be otherwise than advantageous. To compensate, in some measure, for the neglect of nurserymen, and to aid in promoting an object which we consider of national importance, we have undertaken our *Arboretum Britannicum*, which, we confidently anticipate, will be more useful, both to nurserymen and planters of trees, than any work on Arboriculture that has hitherto been produced. The plan is altogether original, as will be seen by the notices of it in p. 558. and p. 581.

We have left ourselves no room to expatiate on the contents of the present Volume of our Magazine; and have, therefore, only to refer our readers to the Table of Contents, in which, under the different divisions of the subject, they will find, we are confident, a rich fund of instruction and entertainment. In conclusion, we beg to thank, most sincerely, our contributors and our readers, and to solicit a continuation of their favours.

Bayswater, *Nov.* 10. 1834. J. C. L.

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THE
GARDENER'S MAGAZINE,
FEBRUARY, 1834.

ORIGINAL COMMUNICATIONS.

ART. I. *Notes on Gardens and Country Seats, visited, from July 27. to September 16., during a Tour through Part of Middlesex, Berkshire, Buckinghamshire, Oxfordshire, Wiltshire, Dorsetshire, Hampshire, Sussex, and Kent.* By the CONDUCTOR.

(*Continued from* Vol. IX. p. 683.)

CAVERSHAM Park. — *Aug.* 9. We proceeded to this place through the village of Caversham (in which are many beautiful cottage gardens), up the hill road, and entered by the back approach. We must notice one of the cottage gardens, which has, in two angles, formed by small wings projecting from the front of the house, two small green-houses in the form of outside cupboards, with shelves full of pots of flowers, the glass doors being removed. We had never seen anything of this kind before; and we like it, not that we think it in good taste, but because it shows such a thorough love of plants. Every one who has read the descriptions of the fine old places of England, in Whately's *Observations, &c.*, knows something of Caversham, and therefore we shall say nothing of the magnificent mansion, containing fifty rooms, and its broad gravelled terrace, 50 ft. wide and a furlong in length, on a perfect level. Though the mansion is dilapidated within, yet exteriorly it is in good repair. The place is worth visiting for the grandeur and beauty of the situation of the house, the terrace, and more especially the descending approach, which has been so finely described by Whately. The pleasure-ground scenery is now entirely overgrown, and only to be recognised by a few cedars and other trees. The kitchen-garden forms a deplorable ruin; the walls are overgrown with bushes, the hot-houses leaning in all directions, the back sheds roofless, and even the gardener's house, which held out till within these few years, uninhabitable. The commanding position of the mansion, and the extensive and varied prospect seen from it, are the same as they ever have been. Among the trees along the descending approach are a number of very large maples.

Comparing Caversham Park with Bear Wood, the situation of the house, in the former case, is much more commanding than in the latter, because of its greater elevation. The prospect is also more extensive for the same reason, and because at the base of Caversham Park is the broad and extensive valley of the Thames. The grandeur and dignity of expression, therefore, of the house at Caversham Park are greater than those of the house at Bear Wood. Comparing the grounds of the two situations, those of Bear Wood are distinguished by undulations, knolls, valleys, and steep banks; those at Caversham, on the other hand, present a uniform surface, flat on the upper part of the park behind the house, and gently sloping on all the remaining part in front of it. There are, therefore, no sources of natural beauty and variety in the grounds at Caversham. When once the view from the house has been seen, nothing about the place remains worth seeing; nothing invites to further examination.

There is thus an essential difference between these two situations; for, though both are grand, but in different degrees, yet, in one, the grounds are positively varied and beautiful, while those of the other are wholly without either beauty or variety. For a constant residence, it is evident that the place containing the greatest natural variety and beauty would be by far the more desirable, independently altogether of the heightening of these beauties by gardening.

By reflecting on the natural features of Bear Wood and Caversham, and on their respective capabilities for improvement, the reader will see the immense importance, in the choice of a country residence, of fixing on one that possesses positive natural beauties; that, unassisted by art of any kind, is capable of affecting the imagination, and raising the emotions of grandeur, sublimity, or beauty. On such a foundation, the art of the landscape-gardener and the architect will work with tenfold effect; whereas, where natural beauty is wholly wanting, though art, more particularly in the house, may do a great deal, yet it can never supply the deficiencies of nature. There is this disadvantage, also, in the beauties created by art, that they require continual care and expense in order to maintain them; whereas those engrafted on nature in a great measure maintain themselves.

The ride from Reading to Pangbourne, along the banks of the Thames, is one of very great beauty. The valley is about half a mile in width, bounded on each side by chalk hills, exhibiting the greatest variety of outline; sometimes clothed with grass, and at other times with corn or wood, or crowned by a gentleman's seat. Near Purley is Purley Hall, a place of considerable beauty, from the undulation of its surface, and the judicious disposition of its woods. There are also some beautiful cottages with gardens, and some small villas, both at Purley and Pangbourne.

Basildon Park, Sir Francis Sykes, Bart.—The house, a large quadrangular pile with wings, by Carr of York, is placed on a piece of table land on the top of a hill, and commands very extensive views. The ascent to it is by a very steep approach, which is both disagreeable and dangerous. We repeat here, what we have frequently stated before, that in no possible case need the road to a house be steeper than an inch to a yard. The approach here might have been led to the house at that rate with the greatest ease, and horses might have trotted up and trotted down. There is but very little pleasure-ground, and this is placed on one side of the house; but the park and farm are of considerable extent. The pleasure-ground has been taken care of for many years past by a local labourer, of the name of Hillsbury, who appears to have some natural taste for laying out flower-beds. He showed us different scroll-like shapes which he had laid out, and lamented his ignorance of the names of plants and their culture. His master, he said, had ordered him to collect some "fir apples" (cones), and sow the seeds of them, and he would be glad to know the proper season for doing so, with the manner of sowing, &c. This shows the great necessity of gardeners being reading men, and possessing books on the subject of their art. This man is doubtless an honest and faithful servant, as he has held his present situation, as he told us, nearly 30 years. The kitchen-garden is on the side of a hill, facing the east, and contains upwards of four acres, with an extensive range of hot-houses; the soil is excellent, and the crops abundant, but choked up with weeds, as there is no assistance allowed for either the kitchen-garden or the pleasure-ground, but a boy. The kitchen-gardener, who is also a local labourer, we did not see. We observed heaps of leaves and twigs being burned, which we would never suffer under any circumstances, as it is throwing away a certain portion of valuable manure. We observed also a paling fence round a part of the pleasure-ground, with the pales, instead of being placed vertically, nailed to the rails at an angle of 45°. The object of this, we were told, is to prevent the entrance of rabbits, which might get between upright pales at the same distance apart, but which must necessarily place their bodies in an angular

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that though there are a number of varieties of the protestant species of Christianity in Wallingford, yet not only the members but even the clergy of the different congregations all live in perfect harmony. We sincerely hope that the period will soon arrive when all religions and all clergy shall be placed upon a footing of equality in every respect, each depending for support on his hearers; and, when this is the case, we feel certain that Christian harmony will be confirmed in such a manner that neither time nor accident shall be able to prevail against it.

—— *Allnatt, Esq.* — The garden of this gentleman surprised and delighted us. It contains nearly an acre of seedling heartsease, and upwards of that extent of seedling georginas. The beauty of some of the varieties of heartsease astonished us, notwithstanding we had seen the 270 varieties in the Epsom Nursery, and the select collection of Messrs. Brown at Slough. The colour and shading of the petals of some of the varieties were as superior to those of the common heartsease of the gardens, as those of the finest green-edged auriculas are to those of the native self-coloured flowers of that plant. As to the georginas, we will not speak of them; they are too numerous for our circumscribed learning in this flower, and we were lost in admiration among them. Mr. Allnatt, jun., cultivates a variety of articles besides these two flowers. We saw the same rare shrubs and annuals as at Mr. Tyso's, and a variety of excellent practices displayed in the culture of culinary vegetables. For example, there were melons of a new variety, grown to a great size, in a bed of tan, heated by a lining of dung introduced through a porthole in a wall, covered by a shutter, so as to show nothing but the luxuriant bed of melons; a tall-growing variety of Indian corn in pots, having, from the scitamineous character of its foliage, a most Oriental, or Tropical, appearance; the Altrincham carrot, grown in rows 18 in. apart, and the carrots at the same distance from each other in the rows, the roots attaining the thickness of a man's thigh, and the length of 3 ft., with a vigorously growing top, for feeding cows or other cattle; Spanish and Portuguese onions in rows at the same distances, the size enormous; and all other kitchen crops in proportion. Mr. Allnatt, sen., has grown on his farm a large quantity of Bishop's dwarf pea, for Mr. Ronalds of Brentford; and he has a moderate breadth of that new and valuable field turnip, Dale's hybrid, the bulb of which is said to be as solid and nourishing as a Swedish turnip, and as tender as an early Dutch. It is also said to be not in the least degree injured by the frost, and it is thought that it will prove to be invaluable for field produce in wet soils. The seed of this variety is also for Mr. Ronalds; and, if a fourth part of what we heard of this turnip be true, it must be a prize of immense value to the farmer. An apple called the creeping apple, a variety of the burr-knot kind, and, like the Carlisle codling, coming early into use both for sauce and eating, is a great favourite with Mr. Allnatt; and the trees are now, as they are every year, covered with abundance of fruit. (See *Ency. of Gard.*, § 4803. new edit.) We had almost forgotten to express our admiration of a long straight walk, bordered on each side with a row of China asters, and beyond these by three rows of georginas, the first row dwarfs, the second higher, and the third highest; also of dung hot-beds, the sides of which were thatched with drawn rye straw, kept close to the dung with rods and hooks, in order to prevent the escape of heat and moisture, to exclude the external rains, and to produce a neat appearance.

The Garden of —— *Clarke, Esq.*, contains a superb collection of seedling georginas; an assortment of heartseases, and a good collection of heaths. Mr. Clarke is an enthusiastic cultivator of the first-named flower, and grows heaths far better than any person whom we have seen between Wallingford and Slough. Altogether, he is a most enthusiastic florist, and a fit cooperator with Mr. Allnatt, jun., and Mr. Tyso.

(*To be continued.*)

Art. II. *A short Account of a late Journey through Belgium and Part of France in the Autumn of* 1833, *by Joseph Knight, Esq. F.H.S.* Communicated by Mr. Knight.

Sir,

According to your request, I now endeavour to give you a short account of my late journey through Belgium and part of France. As horticulture is not in so advanced a state in those countries as in England, I directed my attention to various other subjects as they came in my way.

I left home on the 11th of October, by way of Dover and Calais. Near the latter place, the land is barren, sandy, and neglected. Near Gravelines the soil improves, and continues to do so on to Dunkirk, where it varies. From thence to Burg, we found chiefly very rich grazing land. The farmers are industrious, but poor. The pigs and sheep are of a long-legged bony description; the cows and horses are tolerable; the implements of husbandry are heavy and inconvenient; the poultry is abundant. We next ascended to Mont Cassel, a small town considerably elevated, from which the prospect over an extensive country is very fine and picturesque: the neighbourhood is much undulated, wooded, and interesting to the traveller.

On the road to Poperingen, the land is rich, crops various, consisting of wheat, beans, rape, with mangold würzel, grass, and wood: the latter consists of alder, willow, poplar, elm, &c., chiefly planted in rows and by the roadside, at from 10 ft. to 15 ft.

apart. The trees selected for planting are from 1½ in. to 2 in. in diameter: before they are planted, the heads are cut off at about 8 ft. high. After two or three years' growth pruning commences, and is performed with great judgment and good effect; the timber becoming generally straight, to the height of from 30 ft. to 40 ft. The practice is, to cut the larger shoots close and smooth, which is usually performed in August or September, leaving the smaller branches perfect. It is probable that this operation is performed every fourth year. In the second pruning the strong shoots are cut off close as before, when the smaller branches, before left, are also cut off close. This is done with great care, not to injure the trunk of the trees, which become, generally, as straight as the mast of a ship. The branches are chiefly cut upwards with chisels of various sizes, having handles of different lengths. This operation is performed with great despatch, generally, I conceive, by two men, one guiding the chisel, and the other striking with a mallet, cutting the branches perfectly smooth and close to the trunk of the tree: these wounds, in consequence of being made before the return of the sap, become nearly, if not entirely, healed over before the winter.

[A similar practice will be found accurately described, II. 226. and 461. We consider it excellent, and are happy to find it confirmed by so intelligent an observer as Mr. Knight.]

The cottagers in these parts, though destitute of many domestic comforts, are much less wretched than in England: generally they are provident, industrious, and economical; but few attend to cottage gardening; and, where they do, the produce, from want of the best varieties of seeds, and a better management, is but of little value.

From Poperingen on to Ypres, the land is good: near the latter town there is a tolerable nursery-garden for forest trees; the land is rich, and the country generally flat. Through Courtray to near Ghent, the land is rich and well cultivated. Rape appears to be an important crop, and is cultivated to a very great extent in this country. It is surprising how few indigenous birds are to be seen, which is the more extraordinary in a country abounding so much with food for them: the sparrows are few, the magpies rather numerous, and there is a grey crow or rook seen occasionally.

Near to Ghent there are some market-gardeners, who cultivate excellent vegetables, but display little or no taste for neatness or regularity. Ghent is a large manufacturing town, abounding in nursery-gardens, the cultivators of which are a very industrious class of men, but rather limited in the objects of their cultivation. They have many good and some rare plants. Magnolias and azaleas thrive with them admirably. There is a botanic garden here, which may boast more of its antiquity than it can of its stock of new plants.

Apples, pears, cherries, plums, &c., thrive well, produce abundantly, and remain healthy. The apples are grafted chiefly on paradise stocks, the pears on quince stocks, which limits their growth, and renders them productive at an early age. The mode of culture here, as in France, is worthy of imitation; a well-arranged fruit-garden being an object of great profit as well as amusement. The trees are planted at 10 ft. or 12 ft. apart, and trained and pruned in the pyramidal form, by which means abundant crops of good fruit are obtained from small trees. Among the conveniences which attend on this mode of training may be reckoned, that it allows space to remain for inspecting the fruit, and performing all the operations required.

The pleasure-grounds of the rich here, in Holland, and in France, appear meagre and cold, when compared with those of England, being nearly destitute of laurels, phillyreas, alaternus, arbutus, bays, laurustinus, &c. The general opinion is, that these plants will not survive the Continental winters; but I have seen some proofs of the contrary, and am of opinion that the plants mentioned might be inured to all these countries, and I have no doubt but many of the Chinese plants would be found to thrive well there; as camellias, pittosporums, &c. &c.

Beyond Ghent the land is rather light; but near to and beyond Aloste the quality improves, and hops are cultivated. About Brussels the country is slightly undulated; the land is tolerably good, and the market-gardeners are rather numerous; but they are of the old school, and do not appear desirous to improve either in their mode of culture, or in the quality of their stock. Brussels sprouts, dwarf savoys, dwarf red cabbage, and a few other articles, are very good. There is here a new botanic garden, which, in external appearance, is a noble establishment, and is seen from the Boulevards to great advantage [a view of this garden will be found in V. 327, and a ground plan and description in VIII. 401.]. The collection of plants is not modern, but the director, M. Woters, and the head-gardener, M. Bresurs, are both very anxious to improve.

About four miles from Brussels, on the left of the road to Antwerp, stands the palace of Läcken, upon a gentle eminence, occupied by the king of the Belgians, who is fond of gardening, and a promoter of it. To accomplish his objects, and establish some of the British principles of gardening at Läcken, he has had his gardener, Mr. M'Intosh, from Claremont, who is carrying on great improvements in the erection of hot-houses, green-houses, pits, &c., upon the most modern and best English construction; and it is reported to be the intention of His Majesty to erect conservatories, &c., and to have a good and general collection of rare and ornamental plants, to which he is very partial. The orangery here is a large, noble-looking, well-proportioned building; it is 360 ft. long, 50 ft. wide, and 40 ft. high, with a slated roof, and contains a very large stock of as handsome and healthy orange trees as are to be found any where. The pleasure-grounds have been lately increased, and are very extensive, but require the introduction of new ornamental plants, and particularly of evergreens, of which they, like most of the pleasure-grounds in these countries, are almost wholly deficient.

At Enghien, a few miles beyond Brussels, there is a nursery garden, belonging to M. Parmentier, who has a considerable collection of exotic plants, and amongst them some rare and good species. The Duke d'Aremberg has here a small country residence and garden; the range of hot-houses, &c., in it is handsome and extensive; but the duke's collection of plants, though spoken of here as good, contains little that is rare.

The road from Brussels, through Louvain, is slightly undulated and well wooded. The land is tolerable, but not rich. At Louvain there is a botanic garden, containing a good collection of tropical plants and others, which are in a state of high cultivation: the place is altogether in good keeping, and does high credit to M. Donkelaar, the head gardener, who, for civility and attention, is an ornament to the establishment. The Duke d'Aremberg has near this a large old mansion, in ruins, and an extensive and tolerably well kept kitchen-garden, in which are cultivated some very excellent apples and pears. There is a considerable extent of land, here called pleasure-ground, in the most neglected state that it is possible to conceive.

M. van Mons, M.D. Professor of Chemistry, &c., has given very great attention to the cultivation of pears. On visiting his garden and fruit rooms, I had ample proof of his labour and attention. Both must have been incessant, and the result must be of great public advantage. He has sown seed, and proved the quality of the produce of, as I was told, eleven thousand seedling pear trees, from these, they say, he has obtained about three hundred good sorts. I saw the fruit of many of excellent quality, adapted to the various seasons and objects for which this fruit is applicable. I hope the day is not distant when all the really good sorts will not only be cultivated in this country, but also accurately described.

The road to Liège is through a country of little interest to the traveller. The land is tolerable, but the cottages are miserable poor clay huts, and the general surface of the country is bleak and open, for want of bridges and trees. At Liège, a large town on the banks of the river Meuse, which is there about equal in width to the Thames at Chelsea, there is a nursery garden, kept by Mr. Jacob Makoy, where an excellent collection of exotic plants is cultivated. Coals are here abundant, and also from this place to Namur. The road is on the bank of the river Meuse, which is very romantic and beautiful; resembling much the road from Bakewell to Buxton, in Derbyshire. The country abounds in mines of lead, iron, and coal, and quarries of marble. The latter may at no distant day prove an article of great commercial importance; it is obtained in blocks of various lengths, some nearly 20 ft. long: it is uniform in its quality, is easily worked by the chisel or saw, and is readily converted into slabs of large dimensions, of less than an inch in thickness. [See *Mag. Nat. Hist.*, vi. 76.] Orchard fruits are cultivated here to a considerable extent; and, on the southern exposure of the hills, vineyards are numerous and extensive.

Along the road to Charleroi, Mons, Comines, and Valenciennes, coals are abundant and good, and produce little smoke. The country is open, and the soil moderately good. Succory is cultivated to a very great extent; it is taken up at this time (the latter end of October), and laid in large heaps about the farm yard, preparatory to storing it up for the winter, during which season it is forced in cellars and the blanched leaves sent to market as salading. [See the practice described in detail, II. 460.]

The road through Péron to Paris traverses an open agricultural country, affording little interest to the traveller. Approaching to Paris, the land is partially occupied in the cultivation of culinary vegetables in alternate ridges or beds, of corn, &c., in which neither art, regularity, nor neatness of method is attended to. Near to Paris the greater part of the land is occupied in the cultivation of vegetables for the Paris market, where they appear to much greater advantage than in the gardens. At a village called Montreuil, about four miles east of Paris, the chief part of the peaches for the supply of this great metropolis are grown; and, considering the rough state the trees are kept in, the fruit is surprisingly fine, and the crops abundant. The trees are trained on stone walls, generally plastered over, of 8 or 10 feet high, enclosing portions of ground, varying from the eighth of an acre to an acre, and they are planted on all aspects with similar success. The mode of pruning these trees seems to be without rule or regularity, notwithstanding which, they retain perfect health to an old age, and grow to a good size. The soil is of a brown free-working loam, upon a loose freestone bottom, never very wet or very dry. [See *Encyc. of Gard.*, new edit. § 474.

The nursery gardens in and about Paris are somewhat numerous. The few engaged particularly in the cultivation of exotic plants are not in a prosperous state, nor do they possess a great variety of species, though they have many good plants.

The nursery gardeners of Vitry, a village about four or five miles from Paris, are very numerous, and are chiefly engaged in the cultivation of hardy fruit trees, forest trees, and shrubs, which they grow well, considering the great irregularity and the confused way in which they crop their lands. Their nurseries are chiefly in open fields, and their trees are grown on alternate ridges with crops of wheat, rye, &c. On the same ridge may frequently be seen, intermixed, apples, pears, plums, cherries, and peaches, but very rarely a number stick, to indicate the particular kind of any of the sorts; so that little dependence can be placed on the accuracy of the growers as to names or sorts.

The nursery gardeners, or florists, who supply the markets of Paris with flowers, reside chiefly in or very near that city; the produce of their labours, at all the seasons in which I have visited Paris, from July to November, has always surprised me much. The beauty and superiority of the articles they bring forth amount to perfection itself, and are truly surprising. To enumerate all the articles which I saw exposed in the Paris flower-markets would form a very long list, and, indeed, would be quite beyond my recollection.

I am, Sir, yours, &c.
JOSEPH KNIGHT.

Exotic Nursery, King's Road, Chelsea, Jan. 8. 1834.

OUR readers, we are sure, will agree with us in thanking Mr. Knight for this interesting communication, and entreating him (as he makes an annual Continental tour) always to give us a similar account of it. We wish all nurserymen and gardeners who travel on the Continent could be persuaded to do this. There is a great want of spirit among the young nurserymen about London. They think they have done a great deal if they have ventured as far as Paris; but we are sure, that, if they were to travel through Germany, and even into Italy, they would greatly enlarge their minds, acquire much more professional information than they have any idea of; and, what they will, perhaps, like best of all, extend their commercial connections. —*Cond.*

ART. III. *Investigation of the Theory of the Rotation of Crops.* By the Author of the "Domestic Gardener's Manual," C.M.H.S.

Sir,

MY attention was arrested by the remarks of the reviewer of what is termed "De Candolle's Theory of the Rotation of Crops," in a late number of the *Quarterly Journal of Agriculture* (xxi. 320—327.). I shall notice a few of these remarks as I proceed; but, before I do so, I feel imperatively called upon to place before you and your numerous readers a statement of a few plain facts. They who know me, or who have perused any of my papers with candour and disinterested feelings, will, I conceive, acquit me of undue assumption, or of endeavouring to set up a claim for originality, without just and sufficient reason. That which I borrow I ever wish to avow, as a subject from which I have derived benefit and improvement; but, if I feel confident of having advanced an opinion, or advocated a practice, that, as far as my means of information extend, I conscientiously believe to be originally my own, I should be unjust to myself to relinquish that confidence, until, by proof positive, I become convinced that I have laboured under a mistake.

To quit further preamble, I observe that, at p. 324., we read, " *Brugmans* stated that a portion of the juices which are absorbed by the roots of plants are, after the salutiferous portions have been extracted by the vessels of the plant, again thrown out by exudation from the roots, and deposited in the soil. This idea has been more fully pursued by De Candolle, who sees in it the true theory of the rotation of crops. He thinks it probable that it is the existence of this exuded matter, which may be regarded in some measure as the excrement of the preceding crop of vegetables, that proves injurious to a succeeding vegetation. . . . The particles which have been deleterious to one tribe of plants cannot but prove injurious to plants of the same kind, and probably to those of some other species, while they furnish nutriment to another order of vegetables. Hence it is why one kind of corn crop is injured by immediately succeeding another of the same kind; hence why different kinds of crops may with advantage succeed one another; hence, in short, the propriety of a rotation of crops."

I do not by any means object to the theory alluded to in this quotation; far from it, I believe it to be substantially correct: but why is it termed " De Candolle's theory?" That learned professor has advocated the facts stated: so, it appears, did Professor Brugmans. I was not, indeed, aware that that learned German had written at all on the subject; nor do I now know in what work his opinions are to be found; but it appears that he *preceded* M. de Candolle at the least. Dr. Lindley, also, it can be proved, published a hypothesis by no means at variance with the theory under consideration. In his *Outlines of the First Principles of Horticulture* (No. 52—56.) we read, " Spongioles secrete excrementitious matter, which is unsuitable to the same species afterwards as food; for poisonous substances are as fatal to the species that secrete them as to any other species. . . . But to other species the excrementitious matter is either not unsuitable or not deleterious. . . . Hence, soil may be rendered impure (or, as we inaccurately say, worn out) for one species, which will not be impure for others. . . . This is the true theory of the rotation of crops."

Which of the two professors can lay just claim to priority? for the theory is one and the same. But now we come to another consideration. What did *I* write in the *Domestic Gardener's Manual* in 1829, which work was published complete in 1830? The reader who can turn to that work, at p. 397., under the head "General Remarks upon the Raspberry," will find the following observations: — "Whenever raspberry plants are removed to another situation, the old ground ought to be well manured, deeply digged and turned, and then it should be placed under some vegetable crop. By this mode of treatment it will be brought into a condition to support raspberries again in two or three years. This is a curious and interesting fact, one which proves that it is not solely by *exhausting the soil* that certain plants deteriorate, if planted on the same ground year after year; for, were this the case, manuring would renovate the ground; but it fails to do so: and thus, if peas or wheat, for example, be grown repeatedly on a piece of land, the farmer may manure to whatever extent he chooses, his crops will dwindle, and become poorer and poorer. . . . To account for this specific poisoning of the soil, we must suppose that particular plants convey into the soil, through the channels of their reducent vessels, certain specific fluids, which, in process of time, saturate it, and thus render it incapable of furnishing those plants any longer with wholesome aliment: in fact, the soil becomes replete with fecal or excrementitious matter; and, on such, the individual plant which has yielded it cannot feed. But it is not *exhausted;* so far from that, it is, to all intents and purposes, *manured* for a crop of a different nature: and thus, by the theory of interchange between the fluids of the plant and those of the soil, we are enabled, philosophically, to account for the benefit which is derived from a change of crops."

The foregoing remarks, whether they be correct or incorrect, philosophical or unphilosophical, are tolerably pointed and definite: they cannot be misunderstood; and it will scarcely be contended, that I did not pen them in the year, and in the work, above mentioned.

But Brugmans, it may be said, wrote to the same effect. I deny it not: I only observe, that I know not when he did so. I am ignorant of all concerning his writing, except from the few lines which I have extracted from the *Quarterly Journal of Agriculture.* His works are, and have been, wholly unknown to me; and you, Sir, do not appear to have referred to any of them in your *Encyclopædia of Plants* or *Hortus Britannicus.* He therein only is named as having given a new title to a semihardy and most beautiful shrub, formerly called *Datùra* arbòrea, now Brugmánsia suavèolens. It is of little consequence what and when he wrote, in respect to the subject under consideration; it is enough to be able to adduce proof of the priority of the hypothesis of the *Domestic Gardener's Manual* to that now ascribed to M. de Candolle. That learned professor may have presented enlarged views of the theory, he may have added fact to fact in corroboration thereof; but still his claim to originality falls to the ground.

It is not contended that the necessity of a change of crops is a new theory; far from it: the practice is proved by fact to be more or less expedient. Let me not be mistaken; what I argue for is simply this: that the theory of a fecal exudation of some matter by the roots, saturating the soil, and rendering it poisonous or unwholesome to the individual, but nutritive and salubrious to some other plant, is new; and appears never to have been advanced, or even hinted at, until I wrote the passage extracted, as above, from my work.

I do not for a moment desire to detract from the ability or authority of so able a botanist as De Candolle; but, great and deservedly high as his name and reputation may be, I, a comparatively nameless writer, cannot abandon the consciousness that I penned, from my own unassisted observations and reflection, in 1829, those remarks that now form the sum and substance of what is considered a *new* theory. I have supposed it possible that Brugmans may have anticipated me and every one else; but, even in this case, as was before hinted, what becomes of the present claim? But I have good reason to believe that the fact was not so; for, in a letter very recently received from the president of the Horticultural Society, that gentleman observes: — "The Continental naturalists have lately imagined that trees emit some matter into the soil, of the nature of excrement, which subsequently becomes noxious." If, then, the doctrine be deemed recent, the priority ought to rest with one who wrote nearly four years anterior to the publication of the theory which is thus blazoned forth as new. I quit this part of my subject, in order to allude to matters of pleasing interest in the other parts of the article by the reviewer.

It appears that M. Macaire has made many experiments to confirm the theory of the exudation of matter from the roots. He is stated to have ascertained the fact from a comparison of results, in attempting to raise plants "in pure siliceous sand, pounded glass, washed sponge, white linen, and particularly in rain water. After cleansing the roots thoroughly, he placed them in pure water. After they had put forth leaves, expanded their flowers, and flourished for a time, he ascertained, by the evaporation of the water, and the use of chemical reagents, that the water contained matter which had exuded from the roots." I cannot allow myself space to quote the experiments at large. One, however, with the bean (*Vícia Fàba*) must be noticed.

" *The bean* grows pretty well in pure water. It was found, on trial, that the water continued clear, but assumed a yellow tint. Chemical tests and evaporation seemed to detect a matter similar to gum, and a little chalk. Another bean was placed in this liquor, and would not thrive: and then, in order to determine whether this was occasioned by the want of carbonic acid, or by the presence of some exuded matter, plants of wheat were placed in the water. They lived well, the yellow colour of the fluid became less intense, the residuum less considerable, and it was evident that the new plants absorbed a portion of the matter discharged by the first. Hence, the practice of cropping wheat after beans is justified by this experiment."

The potato scarcely coloured water wherein it was placed, left little residuum, and gave but little taste. " This experiment," M. Macaire observes, " was made upon a plant at an early stage of developement. The experiment would lead to the inference, that the potato is not a very good preparation for corn crops, which is known to be the case in practice, unless it is assisted by an extraordinary quantity of manure. All these facts tend to prove the theory of the rotation suggested by M. de Candolle."

From the foregoing passages, the reader may draw some inference concerning the theory, and the nature of the experiments recorded. I am by no means disposed to retract what I had written upon the philosophy of the rotation of crops; on the contrary, I rejoice to feel myself supported by physiologists of so much eminence. To know, beyond a doubt, that a Lindley and a De Candolle have adduced a theory exactly in accordance with that which some years past impressed my own mind, is at least highly gratifying: to ascertain that the direct experiments of another man of science have tended, as far as they have been carried, to confirm it, is still more so. But I must not neglect to say, that the practice of the rotation of crops may be, and is, carried too far. There can, I think, be no doubt that, whenever a crop fails upon repetition, that failure ought to be attributed to an unhealthy (specifical) saturation of the soil: but rotation, as a *sine quâ non*, an indispensable and never to be omitted practice, ought not to be insisted upon. They who have boldly ventured to persist for a time in recroppings have not found a certain deterioration. As to the potato, it is no uncommon thing to hear of the same ground being planted and replanted, year after year, for a great period of time. M. Macaire's experiment with the potato bears upon the assertion, for it tends to show that it does not produce much radical matter. That plants, in many instances, give forth a considerable portion, may be inferred from the peculiar odour which they impart to the soil; and also from the colour, the change of tint, which the ground acquires from croppings. Let new-turned maiden earth be put into a garden pot, and with it a single strawberry plant, without any manuring substance. The soil, in the first instance, shall be of an ochreous yellow hazel colour. In a single year, how many shades, approaching to black, will it acquire from the deposition of carbonous matter, although it be watered with pure rain water only? Let experimenters determine this and other facts of the like nature, for their own satisfaction: I throw out the hint as a stimulus. It must be conceded, that great difficulty surrounds experiments of a nature similar to those instituted by M. Macaire; for plants in water are not in a purely natural situation: they live, and perhaps grow; but they are not, as the plants in the field, rooted and established in soil, and exposed to the stimulus of the great natural agents. Hence, there is great danger of being deluded by appearances. A cutting, placed in a coloured infusion imbibes the colouring matter, and has induced microscopic observers to suppose that they have thereby detected the genuine channels of the sap: but, as I have shown [VIII. 142.], rooted plants do not evince the same appearances of colour, although the soil in which they have grown has been moistened for a long time with deeply coloured infusion. Plants, in a word, elaborate their own food; they are their own chemists, and ought to be placed in their peculiar spheres of action; otherwise, though life may be protracted, their functions are not naturally performed, nor are their secretions regularly and healthily effected.

The writer in the *Quarterly Journal of Agriculture* invites chemists to investigate and experimentise, in order to improve upon and establish, or to disprove, the theory of Professor de Candolle. I, for one, would volunteer my services, the more espepecially to consolidate my own hypothesis; but I must, in justice, caution every one, that, in order to determine the causes of natural phenomena, the subjects of trial must be placed in truly natural situations. Cuttings afford fallacious data. I am inclined to fear that even rooted plants, growing in pure water only, would not yield products exactly corresponding with those afforded to the soil. In order to operate efficiently, I conceive it would be prudent to wash a sufficient bulk of maiden earth in rain water, to drain it thoroughly, then to plant the subject in a pot of the washed earth, and to water it during its growth solely with filtrated rain water. Plants so treated, and duly exposed to sun and air, might be expected to yield their specific radical exudation to the soil. After a given time, the mould should either be repeatedly watered to excess, and the drainage collected for experiment, or, the plant being removed, the whole bulk of soil should be immersed in rain water, and stirred over and over again. After three or four hours, the water might be filtrated through strong bibulous white paper, and tested according to art. These crude hints are thrown out, leaving the minutiæ to the science and skill of the operator. I could add much to this paper; but, having trespassed very far on your pages, I must not farther enlarge.

Dec. 4. 1833. G. I. T.

Art. IV. *On the Scientific Management of Hot-houses, so far as it regards Temperature.* By Scientiæ et Justitiæ Amator.

Sir,

When we take into consideration the exertions made by philosophic individuals for the purpose of enlightening the mystified processes of vegetable developement, and impressing upon gardeners the importance of conducting their operations upon scientific principles; it is scarcely more amazing to mark the indifference with which (comparatively speaking) we have treated their doctrines, than it is to behold the tenacity with which we have clung to systems of management, which can only be defended by pointing out the success which has followed them, and citing the authority of some distinguished writer, whose name we hold in veneration; while a little calm investigation would be sufficient to convince us, that even a greater degree of success might be realised by other means, attended with less expense, and more in unison with the general operations of nature. In illustration of this position, few subjects could be more appropriately introduced, than the general management of hot-houses, so far as temperature is concerned. In using the word general, I beg leave to say that I am quite aware that a great many gardeners conduct their hot-house operations in a scientific natural manner; but, so far as my observation informs me, they as yet prove exceptions from the great body, who continue to keep, within a few degrees, as high a temperature in their houses at night, as when they are exposed to the influence of a cloudless sun. That a system so opposed to nature should so extensively prevail may be accounted for by the fact, that we have been more anxious to become acquainted with, and to act upon, the opinions of others, than to investigate for ourselves, taken in connection with the circumstance, that, with the exception of the celebrated Mr. Knight, and a few modern writers, the system has received the support of almost every author whose writings are recommended to the attention of the tyro in gardening, as containing nothing which has not received the sanction of practical experience. That the prosecution of such a system has been practically successful I will not dispute; but, at the same time, it appears clear as noonday that that success must wholly depend upon causing the means employed, in themselves opposed to nature, so to counteract each other as to produce finally the result which would be the effect of an adherence to the simple dictates of nature.

Almost every gardener is aware that, for all practical purposes, well-ripened, firm, short-jointed wood is greatly preferable to that which is luxuriant and long-jointed; and, therefore, as an increase of temperature exerts the same expanding influence upon vegetables as upon other bodies, and as this expansion, in the case of vegetables, is greatly accelerated by their being kept in the shade, and in a humid atmosphere, it follows that the keeping up of a strong moist heat in hot-houses, at night, is the very best means for producing elongation of stem and long-jointed wood. But as it is very doubtful if, in these circumstances, much valuable substance is added to the plant, as it is only when exposed to the agency of light (so say our most celebrated philosophers) that the process of decomposing carbonic acid is effected, and the sap receives its final elaboration, so as to become, as it were, the nourishing blood of the plant; it becomes necessary to counteract this tendency to the production merely of elongation of stem, by preventing the thermometer from rising more than a few degrees above the fire-heat standard, by admitting large quantities of air during the day. By this means the internal is reduced to almost an equality with the external atmosphere, and, by making an improper use of artificial heat, the cultivator is under the necessity of depriving himself of the advantages which he might otherwise have derived from the heat of the sun. The tendency of keeping a high temperature at night is to over-stimulate the plants, causing them to expend prematurely their powers of excitability, and, if not counteracted by the means I have referred to, the prejudicial effects soon become apparent. As one instance, I may mention, that last season (1832), it being very desirable to have grapes in a pine stove ripe as soon as possible, no trouble was spared to keep up a high temperature both night and day; and the consequence was, that, although the vines made pretty good wood, the fruit never was high-flavoured, nor yet well-coloured, and soon became shriveled, or rotted off. As the shriveling of grapes is very much complained of, it may be worth the attention of the gardener to enquire, if, in addition to leaving too much fruit for the strength of the vine, &c., it may not sometimes be owing to the keeping up of a high temperature both night and day; by which, notwithstanding the accommodating capabilities of plants, their powers of excitability become expended before the fruit has received its due share of nourishment. But the circumstances to which I wish particularly to direct the attention of my "brothers in youth and in trade" is, that, independently of all our exertions, the grapes, in the pine stove referred to, were not fit to cut above eight days sooner than those in a late vinery, which had received little assistance from fire heat except at the blossoming season. During this season (1833), the pine stove referred to, as well as all the other houses, were managed upon a natural system. The temperature at night in the pine stoves was frequently below 60°, and in the vineries as low as 50°, while during the day the temperature ranged from 80° to 110°, the atmosphere being kept in a moderately humid state. The grapes in the pine stove formerly noticed were ripe from three weeks to a month sooner than last season; the fruit was of the finest quality, both as respects colour and flavour, and so free from shriveling, that a number of bunches that were left upon a white muscat vine with very large berries were cut, in the end of last month, without containing one shriveling berry.

Several gardeners with whom I have conversed upon the subject, while allowing that the present general practice is unnatural, at the same time contend that, when fruit is wanted early, it is necessary to keep up a high temperature both night and day; but the instance I have referred to tends to show that such a practice, instead of accelerating maturation, actually retards it, or, at any rate, leaves very little chance of obtaining fruit of the best quality. As an additional fact, I might refer to our field crops, which ripen most rapidly when exposed alternately to the cold dewy nights and bright warm sunny days of autumn. By allowing the temperature to fall at night, and to rise by sunshine during the day, much less air will be necessary than is generally given, and almost universally recommended, and much labour will be saved. Indispensable as atmospheric air is to plants, it appears to me that its importance has been greatly overrated. However necessary its free admission is, to counteract the prejudicial effects of keeping a high temperature at night, it is not in like manner necessary when the plants are cultivated in accordance with the dictates of nature; as the expanding influence of a high temperature, from sunshine, will, at the same time, be counteracted by the agency of light effecting the elaborating and decomposing processes. Its free admission, for the purpose of imparting colour and flavour to fruit, may be very proper when the fruit has attained its full size, and the temperature is not much reduced; but it is worth enquiring if, even here, light be not the principal agent. The very argument made use of by many, that it is necessary to admit a free current of air, for the purpose of keeping the atmosphere pure in which the plants are grown, will, when duly weighed, recoil upon themselves; as it is only at night that plants can deteriorate the atmosphere, while they perform a salutary process of purification during the day: to act consistently, it is during the night that gardeners ought to give the greatest quantity of air. I know that even this practice is recommended by some, but it cannot be much adhered to in this country with advantage, unless the weather be very warm; or the plants cultivated be such as do not require a temperature higher than that which our climate at the time affords. In general, it will be found most economical to shut up the house early in the afternoon, so as to have all the advantage of sun heat, and then open the top sashes a little the first thing in the morning, which will allow the close heated air to escape; and, what is of some consequence, especially when the fruit approaches maturity, it will help to dry the leaves and fruit before the sun's rays become very powerful.

It will be perceived that these observations are merely general, and do not at all refer to what may be called critical periods in the forcing of fruits, &c. Due attention must also be paid to the native locality of plants, as in some situations plants experience little difference of temperature during day and night. That the system I have pointed out will be attended with less labour and expense than the one generally acted upon requires no demonstration. The young man who knows experimentally what it is to run about like a lamplighter, giving and taking away air, just as the sun emerges from or enters a cloud; or who has had his health impaired by a midnight attendance upon furnaces; in both cases, for the purpose of keeping the thermometer at the *ordered* degree; will duly appreciate the ease and comfort with which hot-houses may be managed, by adopting a system more in unison with nature. Diminution in the quantity of fuel will of itself produce a reduction of expenses. To a great many of your readers, there will be nothing new in these remarks; but, should you judge them likely to be of any use, your publishing them may be the means of leading young gardeners rigidly to scrutinise all doctrines and opinions for themselves, and may teach them not to be the implicit followers of any man; for, small and confined as my knowledge of the science of gardening is, it has already taught me that, by attending to its dictates, results and advantages will be obtained, which industry and perseverance, unaided by its influence, never could accomplish.

I am, Sir, yours, &c.

Dec. 27. 1833. SCIENTIÆ ET JUSTITIÆ AMATOR.

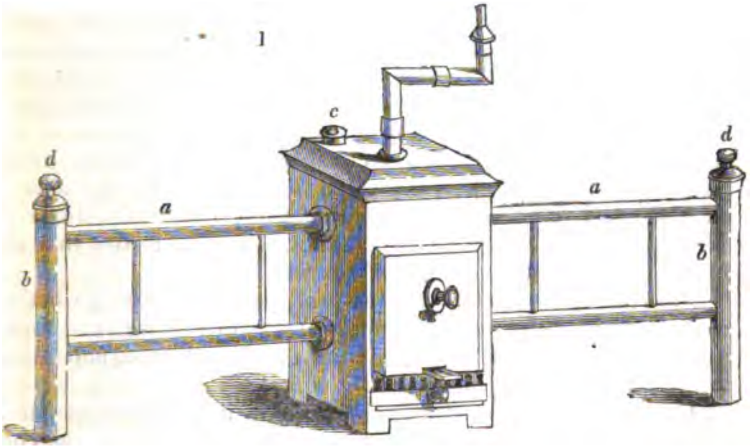
ART. V. *Description of a portable Hot-water Apparatus.* By Mr. JOSHUA MAJOR, Landscape-Gardener and Garden Architect.

Sir,

I HAVE sent for your inspection a model of a portable hot-water apparatus, which I have recently constructed, and wish to make known. While designing various fancy structures for a gentleman's pleasure-grounds, I was led to suppose that something like the apparatus now sent might be advantageously appropriated to such of them as require some little artificial heat. My chief aim was to avoid the appearance of smoke and chimneys, which cannot usually be dispensed with, in the case of the introduction of coal or wood fires; and my next object was, to have the apparatus portable, so as to be able to remove it from place to place, as it might be wanted. It is probable the apparatus may be advantageously used, in small frames, to assist any insufficient heat in severe weather; and I think it could not fail also to be useful, were it introduced into some of the small green-houses which are frequently to be met with in the metropolis and other large towns; and which, being generally destitute of any mode of supplying heat artificially, seldom, if ever, exhibit healthy plants.

I have employed this portable hot-water apparatus in warming one of the entrances of the conservatory formerly belonging to Bretton Hall (VIII. 361.), but which is now connected with a gentleman's drawing-room, for the reception of plants as they come into flower, which could not conveniently be warmed in any other way; and, while writing this, I have received an order for one to be sent into Lincolnshire, of the size here described, for a very small green-house, 9 ft. by 6 ft., which, no doubt, will be quite sufficient for a place of that extent.

The apparatus may be made of tin or copper; the latter, though, of course, it would cost more at first, would, owing to its durability, in the end, no doubt, be the cheapest. Charcoal is employed for heating the apparatus; oil lamps have been tried instead of it, but with not near so good an effect. As it is necessary to employ pipes to conduct the effluvium (arising from the charcoal) out of the place required to be warmed, it will, in order to secure all the heat possible, be of importance to introduce a sufficient length to allow the whole heat to pass off, before the ends of the pipes are turned to the outside. In order to make the smoke conductors suitable for any situation, it is only necessary, in addition to the elbow-pipes, to be provided with several lengths of straight pipes, placing one elbow upon the permanent smoke conductor connected with the fire, and the other at the extremity, or midway, of the piping, as it may be required. The largest-sized apparatus could not well be more than 8 ft. long; as, if larger, it would be inconvenient to move about. The size of the one which appears the most useful is as follows:—The whole height of the centre portion of the apparatus, comprising the boiler, &c., is 15 in., and width 5¼ in. by 7½ in.; the fire-pan is 5¾ in. by 4½ in., and 3½ in. deep; surrounded on three sides by a boiler half an inch in diameter, which becomes more spacious upwards as the fireplace diminishes. The opening necessary for the reception of the fire-pan, and for supplying it with fuel, is 6 in. wide by 5½ in. deep: at the top of this opening the fireplace commences tapering; consequently the water in the boiler expands more immediately over the fire; the smoke pipe takes its regular width (1½ in.) in the boiler, about an inch below where the lid unites; the horizontal water pipes (*fig.* 1. *a*) are each 28 in. long, by 2 in. in diameter; the end pipes (*b*) are 14½ in. high, by 3 in. in diameter: a feeder (*c*) is added, in case it should be thought better to have the lid fixed tight on the boiler. In order to promote the circulation of the water, small holes are to be perforated in the top of the lids (*d d*), which are also intended to be fixed tight. The apparatus may either be placed on the floor of the place to be warmed, or raised by bearers, or suspended by wire or cord, the two latter methods assist the fire to burn more freely. I am, Sir, yours, &c.



Joshua Major.

Knowstrop, near Leeds, Dec. 12. 1833.

Art. VI. *On the different Kinds of Fountains adapted to Gardens.*
By William Mason, Jun. Esq.

Sir,

Touching the arrangement of fountains, promised in my last (IX. 538.), I have only to observe that, as method, ever so little pursued, does, in the same proportion, facilitate operation, so would I say, that, by giving fountains the names of class and character, we shall assist the projector in his communications with those who employ him. Thus, then, I should divide fountains into two classes, the cascade and the jet: the cascade fountain invariably falling from an unseen source above and the jet fountain rising into the air from a source that is visible below. These classes I should again divide into the natural, the simple architectural, and the enriched. The taste of the projector must adapt class and character to the situation, or, as those have it who forget their mother tongue, to the *locale:* as, for instance, bad taste might, perhaps, adopt the jet near a Swiss cottage, where a natural cascade would be harmonious with the scene; and, *vice versâ,* would, perhaps, adopt the natural cascade in a geometric garden, and reject the jet, which would there be probably more in keeping with the general features, particularly if made of the enriched character. When such absurdities are put in juxtaposition with each other, the critic is apt to scout the idea of treating such contradictions as chimerical; but the shade of Repton is not wanted to be summoned up, to testify that the remark is justified by every day's experience.

Now, as to character: the natural speaks for itself, whether cascade or jet: the one falling from rockwork above, and forming rills below; the other rising from a rockwork base, and falling into a pool around or against it.

The simple architectural has nothing in it but what geometry, in the hands of a stone-mason, may execute; while, on the contrary, the architectural enriched opens a wide field for genius to display all its glorious riches by the hands of the sculptor.

Having now briefly given all that perhaps may be said on the methodical arrangement of fountains, I beg to send you in this sheet a design for a *natural cascade fountain* and hermitage; or, according to the foregoing project, a fountain of Class I. character 1., and subscribe myself, till my next, Yours, &c.

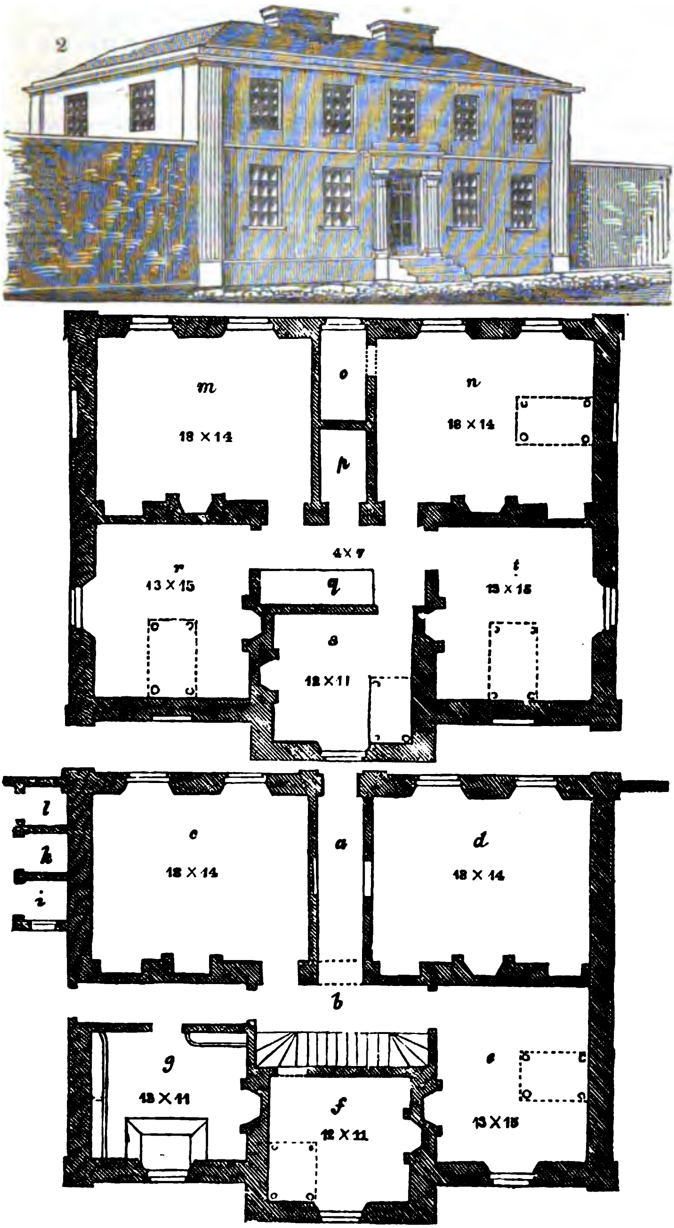
Necton, Norfolk, Nov. 1833. WILLIAM MASON, Jun.

WE have not engraved the design sent, because there are many such already published; several will be found in the new edition of our *Encyclopædia of Gardening,* now publishing in parts. For example, in Part I. fig. 20, and Part III. fig. 134. We shall be glad of a continuation of Mr. Mason's communications.—*Cond.*

ART. VII. *Design for a Gardener's House, adapted for the South Wall of a Kitchen-Garden.* By J. ROBERTSON, Esq. Architect.

IN conformity with our promise, made in Vol. VIII. p. 551., we proceed with our designs for gardener's houses, suitable for being joined to the walls of a kitchen-garden. We have already given a design for an east wall (VIII. 551.), one for a west wall (VIII. 659.), one for a north wall (IX. 477.), and we now give one for a south wall. (*fig.* 2.)

2



The Ground Floor contains: *a*, entrance lobby; *b*, passage and staircase; *c*, kitchen; *d*, parlour; *e*, apprentice's bed-room; *f*, servant's bed-room; *g*, office and library; *i i*, water-closets; *k*, fuel; *l*, ashes.

The Chamber Floor contains: *m*, seed room over the kitchen; *n*, best bed-room; *o*, closet to best bed-room; *p*, lumber closet; *q*, press for linen; *r*, *s*, *t*, bed-rooms.

ART. VIII. *On adopting a regular Plan in forming Plantations, with a view to facilitating their after Management.* By CHARLES LAWRENCE, Esq.

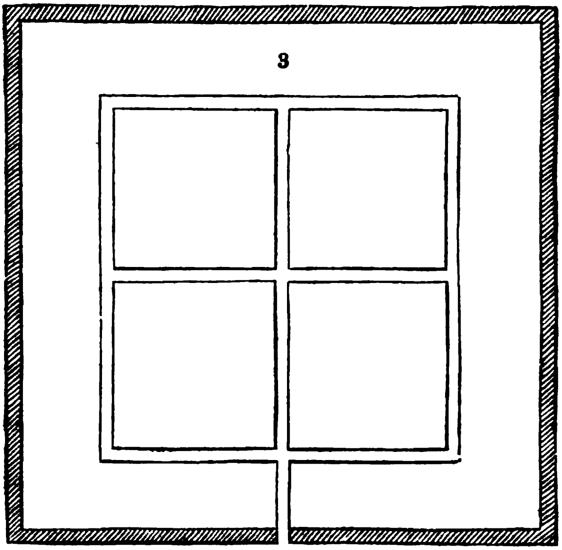
Sir,

As you number amongst your readers many scientific men and persons of taste, I must premise that, on the present occasion, I have nothing to say to the one or the other; but that my business is with the country gentleman, who is thinking nothing about either science or taste, but who has the *cacoethes plantandi* upon him, and is about to plant his twenty acres of land this winter, merely as a crop; and who, should he ever hereafter dream of thinning his plantation, would be much too idle to mark every tree which ought to be removed until the crop was half spoiled; when he would at length merely order men, probably without much more thought or judgment than the tools they wield, to " thin the plantation."

I am sure I am far within bounds, when I assert that at least half the trees which are planted, whether for ornament or profit, are either disfigured, or rendered comparatively valueless, by being originally planted too near together, or by being allowed to remain too long without thinning. As there are but few that plant who, from want of observation and experience, are capable of directing this operation to the best advantage, and many of those who are competent are indisposed to undertake a task which requires so much time, attention, and perseverance; and having personally felt it a very irksome task to mark a large plantation of small trees, it occurred to me, some years ago, that, after selecting those species of trees which were best adapted to the soil under culture, instead of planting them indiscriminately, it would very much simplify both the first setting and the thinning, if they were planted upon a regular plan. I have tried this repeatedly, and can strongly recommend the adoption of the system by those who are planting merely for profit, and without any view to scenic effect.

The first point to be considered is the selection of such trees as are observed to flourish most in the particular locality, and as are known to thrive in the soil you are about to operate upon. The next matter to be determined is the ultimate object in view; viz., whether you wish to create a permanent wood, or to plant merely as a means of converting land, in its actual state neither profitable under tillage nor as pasture, into good pasture eventually; for this has been accomplished over and over again, especially by the agency of the larch. In order to explain my views intelligibly, I will suppose that the land to be planted has been previously cropped with the view of getting it perfectly clean (a very essential preliminary), and that it is intended for permanent wood; that the soil is suitable for oak, larch, and ash; and that the situation is sheltered, or at any rate not much exposed to winds.

It is necessary, in the first place, to set out roads at suitable distances, with reference to the shape of the ground, in order to get out the trees as they are cut, without injuring those which are to remain. These should be 20 ft. wide, and so laid out that every part of the wood be equally accessible. (See *fig.* 3. the margin of which is intended to represent the outer fence.)



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The land, if retentive of moisture, should be formed into beds 22 ft. wide, by throwing out alleys 2 ft. wide between them, which will give four rows to each bed; the outer rows, on either side, being 2 ft. from the alleys. The holes should be dug over the entire piece immediately after harvest, about 2 ft. in diameter, and spade deep; well loosen the bottom of each, in order that the soil may be thoroughly exposed to the sun and air for two or three months, till the beginning of November. To perform this operation with regularity, get a line, and tie a shred of scarlet cloth, or a bit of yarn, on it, at intervals of 6 ft. When the line is strained, dig round each shred, making that the centre of every hole. When the holes are dug the length of the line, measure off 6 ft. from the centre of the first and of the last hole in the first row, at right angles with them; then insert the stick exactly opposite the centre of the interval between the two first holes, and strain the line, dig round the shreds as before, which will bring every hole in the second row opposite the intervals in the first row, as shown in *fig.* 4. This is material, inasmuch as it breaks the force of the winds. When the beds are dug over, then the roads are to be holed upon the same plan, leaving the holes in this case 5 ft. apart, which will take four rows, allowing 2 ft. space from the edge on each side. I recommend trees that have been two years transplanted, and not exceeding 3 ft. high. These will be found to answer infinitely better than larger trees. It is a very common practice, in planting, to hold the tree in the bottom of the hole, throwing the soil over it, and then drawing it up, and shaking it, as it is said, to get the mould between the roots. This should be avoided; for the obvious effect, or rather defect, of this is, to close the roots into a ball, whereas they should be spread out widely. Plant the tree as shallow as possible, consistently with its being firm in the ground.

If the land be of a loose texture, and properly prepared, one hoeing, during fine sunny weather, in the month of May, for the first three years, will be sufficient. If it be of a close tenacious quality, a crop of potatoes (two rows between each line of trees) in the second year will be very beneficial. In the second winter after planting, cut off all the oak and ash, within 3 in. of the ground. In the following summer select the best shoot from each stool, and rub off all the rest: this will produce much better ash poles, and much straighter and more free-growing oak trees, than would otherwise grow.

I have been led much more into detail than I contemplated; and part of what I have said may appear to many very unimportant; but I have felt decided practical advantages, and much subsequent convenience, result from a little attention to these minutiæ, and I therefore insist on them. I now come to the main point which induced me to take the pen in hand; viz., to show that the thinning, so essential to a crop, need not be deferred for want of opportunity to the proprietor to mark, or from an indisposition to leave the operation to mere labourers for fear of damage, if the land be planted on a regular system.

Fig. 4. is a plan for one square of a plantation formed of oak, ash, and larch, as an example.

At the distance of 6 ft. apart, no thinning will be required until the ash attains a sufficient size for hurdles, hoops, &c., which will be from twelve to fifteen years' growth, according to the quality of the land; or even eighteen, if very poor. At this period cut out the ash in all the roads, with a downright blow, rather under the ground, which will prevent its shooting again. Unless there be a great demand, this will produce as much wood as could be disposed of at one time to advantage. In the following year cut off every other ash, in the rows composed exclusively of ash, with a blow in an upward direction, from 2 to 3 in. above the ground, in order that the stools should

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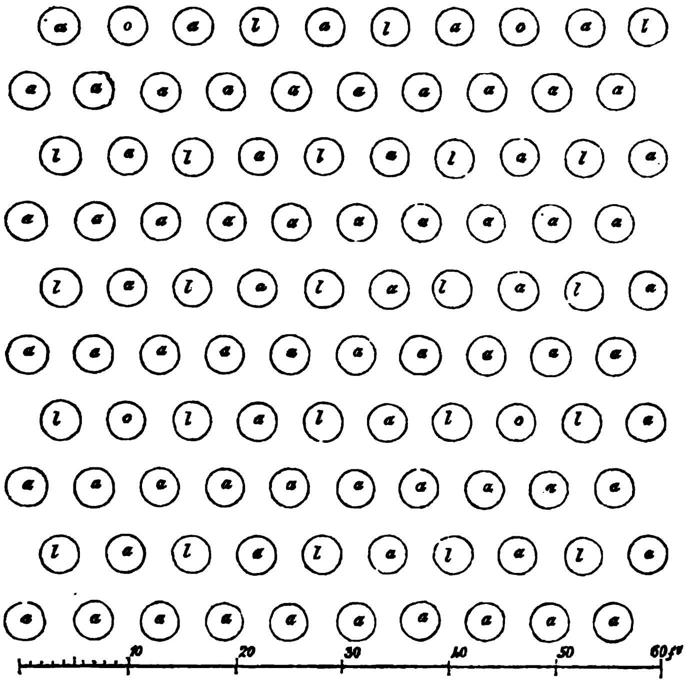

shoot again. In the third year cut off the ash between the larch and oak in the same manner. In the fourth year cut out the remainder of the ash with a downright blow, under the ground, to prevent their shooting again. The ash left for stools will produce, in the summer after cutting, several shoots: these should be thinned out, leaving not more than three or four of those best placed for a crop. When these have attained sufficient growth to be crowded by the larch, the latter will be from 20 to 25 years' growth, and should be cut out as soon as the sap is sufficiently in action to admit of their being barked; for, though their bark does not bear a price in proportion to that of oak, with reference to the tan it yields, it will pay for stripping. At this age, larch, in almost any soil but clay, is extremely useful for roofs of barns, cottages, sheds, and a variety of agricultural uses; its value and usefulness for these purposes is as yet very little known in many districts. It has not sufficient credit for durability. I have used larch of this age for protecting young whitethorn fences. By cutting off the but end, 6 ft. long, and sawing it through the middle, two posts are obtained; the remainder, sawed through, will give two rails of considerable length and strength. With a fence thus made, I have reared a quickset hedge till it was a perfect fence against any cattle; and, on taking up the posts and rails, I found them sufficiently sound as a fence to raise a second quickset hedge.

Upon this plan it is obvious that any labourer could effect the necessary thinning without any superintendence; he could not make a mistake. If a variety of timber be desired, sweet chestnut may be substituted for every other oak; both thrive well, generally, on the same soil; or any other timber trees may be planted more suitable for the particular soil, keeping them in the same places assigned in the plan to oak. The underwood may also be varied, by the introduction of oak, wych elm (*U'*lmus montàna), *S*àlix càprea, hazel, &c., all of which form excellent coppice wood; but they must be introduced in regular order, with reference to future thinning.

If the ultimate object be a return to pasture, all the ash must be cut off under the ground; the timber trees will then stand, after the removal of the larch, 36 ft. apart every way. Many will require removal; and this may be accomplished according to the taste of the proprietor, selecting generally the largest, as the most useful for gate-posts, fencing, &c.

In very bleak exposed situations, I would recommend planting a Scotch pine, or some other nurse, between the trees, so that the whole plantation should stand, at first, only 3 ft. apart; and that all these should be cut out at four or five years' growth, when the other trees are well established. If the planter be a game preserver, he may, at intervals of 100 yards, plant a patch of laurel, holly, and yew, and in every tenth or twelfth row of ash substitute spruce, silver, or balm of Gilead firs for every other ash: this will shed a gloom over the plantation, and afford a secure roost for the pheasants on a moonlight night.

I cannot conclude without cautioning gentlemen against what is misnamed *cheap planting;* merely loosening the earth with a pickaxe, sticking in the trees at so much per thousand, without any previous preparation or subsequent care. This is wretched economy; a term, by the way, sadly misunderstood, notwithstanding the lucid exposition of it which I recollect to have seen, I think, in the writings of Burke,—"Economy is a distributive virtue. It consists not in saving, but in selection. Great expense may be an essential part of true economy." I am sure this is true as applied to planting. I feel half inclined to submit a few hints upon planting and managing ornamental shrubberies; but I will forbear, for fear of occupying space to the exclusion of much more valuable matter from the pens of others.

I am, Sir, yours, &c.
Cirencester, Oct. 4. 1833. CHARLES LAWRENCE.

WE shall be particularly obliged by our correspondent's remarks on the subject mentioned; and, indeed, by any article, on any subject suited to our pages, from his pen.—*Cond.*

Art. IX. *Considerations on the evil Effects of exposing Green-house Plants to the open Air of Britain during the Summer Months.* By Mr. Robert Marnock.

Sir,

The practice of turning green-house plants out of doors in summer may be necessary under particular circumstances, and with regard to certain species of plants; but, in cases where green-houses are properly constructed, and solely devoted to the cultivation of plants, these will generally be found to be injured, rather than benefited, by this treatment; particularly when turned out early in the season. Were it possible to manage green-house plants during the winter as it could be wished, and as they require, exposing them to the open air in summer would no doubt be highly beneficial to them; but, from the changeableness of our climate, and the frequent (though often unnecessary) application of fire heat, to guard against the sudden attacks of frost, a considerable degree of excitement is induced, and, before the season has arrived at which they can be safely exposed to the open air, they are all, or nearly all, in a state of vigorous growth. Without regard to this circumstance, they are at once removed to their summer quarters, when, although the frosty nights may have gone by for the season, the temperature during the night is often so low that a complete check is given to their growth, from which they seldom recover till towards the approach of autumn; when, after having regained their energy, and become, as it were, inured to their new climate, they once more make an effort to grow. From the gross habit which they have, however, now acquired, together with the lateness of the season, the shoots are seldom well matured, and the plants are, therefore, in the worst possible condition to resist the effects of frost, mildew, damp, and other causes by which green-house plants are liable to be injured. But, when plants are retained under glass during the summer, both the first and second growths are ripened sufficiently early in the autumn; and, unless very improper excitement be applied, they will remain in a state of comparative rest till the following spring, when their flowers will be both more perfect, and much more abundant than such as may have stood out the preceding summer.

I do not wish to be understood as recommending green-house plants to be kept crowded together in the house the whole of the summer, in the way we generally find them to be in winter. Duplicates and all the coarser and hardier kinds may very properly be removed out of doors; and these would, in most cases, be sufficiently numerous to afford room enough for those that are left, to stand without touching each other. During the summer the whole of the movable sashes in the roof and front of the green-house ought, except during long-continued rain or thunder storms, to be kept open both day and night, to admit as much air as possible; and the plants should occasionally be syringed over-head with water, which may be done at any hour of the day, without regard to the shining of the sun. I mention this, from having been myself sometimes cautioned never to wet the leaves of plants when the sun was shining upon them, unless I wished to have them burned. When the roots of plants thus exposed to the sun can be preserved in a tolerably cool and moist state, their tops will not only bear the sun, but his full influence is indispensable to their health and vigour, and the full developement of their flowers.

Orange trees, camellias, and, indeed, all plants with coriaceous or thick fleshy leaves, are, from a variety of causes, liable to have their foliage injured by the sun; but this injury would seldom accrue to them were they retained in the house both summer and winter, and kept as cool as possible during the latter season. Consistently with the above considerations and provisions, fire heat need never be applied till the thermometer in the house has indicated three or four degrees of frost.

I offèr these remarks in particular application to evergreen plants with heath-like foliage, but more especially to the several genera composing the two splendid natural orders *Ericeæ* and Epacrídeæ, which perhaps contain a greater number of really beautiful plants than are to be found in the whole of the other orders put together. Most of the plants belonging to these two orders are furnished with roots of an exceedingly delicate nature, but, from the fine hair-like substance of which they are composed, no plants are better adapted for growing in pots, or are susceptible of a higher degree of perfection by this mode of culture. The means, however, which enable the attentive cultivator to produce specimens of great elegance and beauty, also operate to cause disappointment where the least neglect occurs, either in the application of too much or too little water; and these are evils which cannot always be guarded against, even by those who are the most careful. In plants having their roots confined within the limits of a garden pot, and exposed to the sun on the shelf or stage of a green-house, and watered at certain periods of the day, without much regard either to the state of the weather or the degree of their several wants, it is no wonder that, when so treated, some of them should, occasionally, appear sickly, and others of them die; indeed, it is certainly less to be wondered at than that they should exist at all.

The chief objection, therefore, to plants being kept in the house in summer is, that, being exposed to the sun, the earth in the pots becomes dry, and the extremes of heat and cold, wet and dry, to which the roots are thence subjected, cause the plants to assume a brown and unhealthy appearance; and, generally, the leaves on the lower branches to fall off. These evils may, however, be effectually prevented by using double pots, as recommended by Mr. Blair in IX. 576., with this modification, that his pots, being intended for growing marsh or aquatic plants, require to be cemented together at the bottom; but, for the purpose of which I speak, nothing more is necessary, than that the empty pot, which is intended to form a screen for the other which contains the plant, be sufficiently large to receive the latter within it, so that the tops of both are nearly on a level. I have practised this, less or more, for the last three years, both with stove and green-house plants, and, during the dry weather of last summer, at least one hundred of the latter had their pots protected in this way.

Those who cultivate many of the tropical ferns will also find it of service in preserving the delicate roots of those plants from the effects of dry heat. I am, Sir, yours, &c.

Bretton Hall, Nov. 6. 1833. R. MARNOCK.

ART. X. *A Notice of certain Conditions in connection with which Rhododendrons have been found to grow and flower very satisfactorily.*

By Mr. JOHN GOW.

Sir,

WHEN I undertook, in Sept., 1827, the superintendence of these gardens, I found that my predecessor had left me a valuable legacy of several thousand seedling plants of *Rhododéndron pónticum*, in a three-light frame. In the last week of July, 1828, I had the whole of the plants lifted very carefully from the seed-bed, with a little ball of earth attached to each. Three thousand of the largest and the best were sized, and planted in nurse beds, in a north border behind the forcing-houses, in rows across the border; the rows 1 ft. asunder, and the plants 9 in. apart in the rows. I had, preparatorily, had the original soil removed to the depth of 14 in., and the excavation filled up with peat earth: after the planting, I gave a good watering with a pot and rose. As I had still upwards of 1,500 left, and the expense of preparing beds of peat earth was very considerable, I resolved upon giving them a trial in the common garden soil, which is of a light sandy nature. A part of a north border, within the kitchen-garden, was selected for the purpose. I had it well dug, and the surface made smooth with a rake; the best of the plants were then again selected, and planted in rows across the border, at the same distances as before: after the planting, a good supply of water was given. Upwards of

700 of the worst plants still remained; and, as I had not a spare piece of ground for them in a sheltered situation, I chose a spot on the outside of the garden, among a young plantation of filbert trees, with the soil of the same quality as that of the garden, but in a very exposed situation; the ground was well dug, and the surface made smooth with a rake: in this they were planted in rows, at the former distances.

I have now to state the progress of each plantation; and, in doing so, I shall first remind you, that only the two first mentioned stand upon an equal footing in point of climate. The first had an advantage in the vigour of the plants; and they certainly did make considerable progress in the first and succeeding years, insomuch that three fourths of them were planted out in groups, in various parts of the pleasure-grounds and woods, in the winter of 1830 and 1831, without any other preparation than the ground being well trenched 2 ft. deep, and the surface well broken in the bottom of each trench. They continue to grow with luxuriance, and flower profusely. The second plantation, as might be expected, did not grow very strongly the first year after being planted; but, the second year, they began to grow very vigorously, as they still continue to do. The greater portion of them have flowered during the last two seasons; and they are equally as well rooted, and can be lifted with as good balls attached, as those planted in the peat earth: a circumstance which very few would credit did they not see it; but a circumstance which has been witnessed by many perfectly well qualified to judge, and, among others, by Mr. W. M'Nab of the Royal Botanic Gardens, Edinburgh. This eminent horticulturist, when he saw them, said, in his usual straightforward way, "They look healthy and well, but I should like to see the bottom of them:" which request was instantly complied with; when he expressed himself satisfied with the success of the experiment. The plants of the third parcel, which were planted in the exposed situation, did not make much progress for the first two years after being planted; neither have they as yet made such strong shoots as the plants of either the first or second parcels. This I attribute, in a great degree, to the exposure of the situation; and to want of shade, of which the family of rhododendrons seems to be peculiarly fond. Still the plants are very healthy, and flower profusely: their average height is from 2 ft. to 3 ft.

It will be seen, by the above statement, that the adoption of my present practice was a matter, not of choice, but of necessity; and, from the success which has attended it, I am led to infer, that, in all sheltered situations, where a moderate degree of shade is afforded, and where the soil is of a light sandy nature, the *Rhododéndron* will grow and flower well, without any peat earth whatever; provided the ground has been properly prepared, by trenching and breaking of the surface, so that all the grass and vegetable matter be properly mixed. I deprecate the too general practice of pitting and planting without the ground being previously well trenched. It may be proper to state, that the *R*hododéndron is to be seen growing here very luxuriantly, in banks of very strong clay: in this case, after the ground had been well trenched and broken, I had pits made according to the size of the plants, and a portion of peat earth placed under and around each plant (say, from one to two barrowfuls, according to the size of the plant). Notwithstanding my having filled the pits with peat earth, I am satisfied that rhododendrons, and other American plants of the same tribe, usually grown in peat, will grow and thrive even in clay, and perfectly well in loam, if it be trenched, and a portion of leaf mould and of the scrapings off roads be mixed with it; the plants being planted in the neighbourhood of large trees, so as to be benefited by their shade. I have planted American shrubs with success at all seasons, but prefer from the second week of August to the end of December; always taking advantage of a mild day, and always giving, after the planting, a good supply of water. I would add, that the same treatment that I have recommended for rhododendrons is here applied to kalmias, azaleas, andromedas, vacciniums, and cistuses: and to all with an equally satisfactory result.

I would recommend all, who may wish to cultivate the *R*hododéndron pónticum extensively, to provide their stock of plants by raising them from seeds. The mode is a cheap one; and, besides the number of the plants which may be obtained by it, a considerable variety of kinds is acquired. In those which I have reared, the variety is almost endless, as to the shape, size, and colour, both of the leaves and flowers, particularly of the latter. The seeds should be sown in February, upon a gentle hot-bed.

In offering the above observations, I disclaim all notion of originality: all I can say is, that I have attempted to give a detailed account of the method practised here. Should any admirers of these beautiful evergreens feel inclined to adopt the practice which I have endeavoured to describe, I can, with confidence, assure them, that it will be found an economical mode of obtaining fine healthy flowering plants.

I am, Sir, yours, &c.

JOHN GOW.

Tulliallan Gardens, Dec. 13. 1833.

Art. XI. *Description of the Lime, Citron, Orange, and Lemon Trees at Coombe Royal, the Seat of John Luscombe, Esq., Devonshire.* Communicated by the Proprietor.

The following brief description of the lime, citron, orange, and lemon trees at Coombe Royal, and of the manner in which they are treated, may not prove unacceptable to the readers of the Gardener's Magazine: —

The trees are planted against a south wall, which is divided by buttresses, forming recesses, in which the trees are trained in the manner of common fruit trees. Each recess is 12½ ft. wide, and about the same in height; and is protected, during the winter, by a frame of wood, which is wholly removed in the summer; and partially, by day, at other seasons, the trees only requiring to be guarded from severe frost. A more interesting sight cannot well be imagined by the lovers of horticulture, than that which is presented by these trees on a sunny day in winter, when the open frames furnish a display of the richest foliage, and of fruit rivalling the produce of foreign countries. The soil, which is seldom manured, is light and rich, on a slaty substratum, and seems admirably adapted to trees of the citron tribe; the situation in which they are grown is in a sheltered valley, protected from wind. It is necessary to add, that the lime is grown under glass in winter; but it is believed that the tree would thrive equally well under wood, and be more secure from frost and storms, a fine tree, in full bearing, having been destroyed a few years since by the accidental breaking of a frame or two of glass in winter. The fruit is produced abundantly by the citron, oranges, and lemons; by the lime, more sparingly, from the tree being young, and in a vigorously growing state: and, when gathered at a proper period, the fruit is of a fine flavour, and full of juice. Specimens of the fruit accompany this communication; and some idea may be formed of the size which they attain, when it is stated that citrons are every year ripened, measuring from 14 in. to 18 in. in circumference: and, as a further proof of their luxuriancy, the reader is informed that there are now on the tree between three and four dozen green fruit, from blossoms produced in May and June last; some of which measure, at this time (September), 12 in. and 14 in. in circumference. Several young trees have recently been planted, which are in a thriving state.

A Banksian medal was presented to the late John Luscombe Luscombe, Esq., by the London Horticultural Society, for oranges, lemons, and citrons exhibited in April, 1827.

Coombe Royal, Devon, Sept. 25. 1833.

The fruits received excited the admiration of ourselves and every one who saw them, both for magnitude and colour. Their weight and dimensions were as follows: —

One citron, measuring 18¾ in. round the long, and 17 in. round the short, circumference, and weighing 36 oz.
One citron, 18¾ in. by 16½ in.; and weighing 37½ oz.
One green citron, 15 in. by 14¼ in.; and weighing 17½ oz.
One lemon, 11½ in. by 9 in.; and weighing 5 oz.
One unripe lemon, 11½ in. by 8¾ in.; and weighing 7½ oz.
One orange, 9½ in. by 9½ in.; and weighing 6½ oz.
One orange, 10½ in. by 9¾ in.; and weighing 6½ oz.
One orange, 9½ in. by 9¼ in.; and weighing 5 oz.

Among the leaves which enveloped the fruit, one of those of the citron measured 10¾ in. in length, and 6¾ in. in breadth; and the others were large in proportion.

On tasting the fruit, we found the oranges without much juice; but the citrons and lemons were full of juice, and most excellent. Of the oranges and citrons we made a most delicious preserve; and the lemons were used for culinary purposes. — *Cond.*

Art. XII. *On training the Peach Tree.* By Mr. Edward Callow, Author of a Treatise on the Cultivation of the Mushroom. (See VIII. 213.)

Sir,

I trust the result of a long and successful practice in training the peach tree will not be refused a place in your pages, or be thought undeserving the attention of your readers. I profess no new theory of training, and, indeed, suspect that, perhaps, the many that have been sent abroad to the world, tend rather to bewilder than to instruct, and to draw the attention of the gardener to fantastic forms, instead of simply teaching him to observe the dictates of nature.

The peach tree will, for the first few years of its growth, endure to be trained in almost any form, and may, for a short period, bear fruit under almost any mismanagement; but when a tree is trained to a shape very different from what it would naturally assume, it can, I conceive, have a life of but short duration. The weak and diseased trees which are so frequently seen against our fruit-tree walls (the miserable state of which is generally attributed to soil, situation, or climate) are more frequently produced by improper treatment than any other cause; for it is common in the practice of horticulture to attribute all failures to natural causes, when, in truth, many of them are the effects of our own folly or inattention.

In my first attempt at training the peach tree, I followed the fan manner, but found the lower branches to become soon weak, and, in a few years, to decay altogether, leaving the under parts of the wall naked and unsightly; and, in such cases, replanting after eight or ten years became necessary. But this was not a decay from age; it was produced by the lower branches having been laid at a less angle than others, which deprived them of their due proportion of sap. While striving to obviate this difficulty, I was struck with the form of the lower branches of some large elms, which, though they projected ever so far horizontally, still had their extremities always inclined upwards.

Taking these branches for my guide, I altered my mode of training, and, by turning up the extremities of the branches*, so as to give to all an equal inclination and equal curvature, convex towards the horizontal line of the earth, I was enabled to maintain all parts of the tree in equal vigour. This mode of training has continued to be my practice upwards of thirty years, and, under it, the trees have grown to a large size, and have continued in a full state of health to a considerable age.

Mr. Knight has observed "that each variety of the apple tree has its own peculiar form of growth, and this it will ultimately assume, in a considerable degree, in defiance of the art of the pruner." This observation is most correct with regard to all standard fruit trees, and it is in some measure applicable to those trained against walls. We may see a whole tribe of plants with a tendency to assume some decided form, and again, in the varieties, marks of slight variation; yet all this is totally disregarded in a tree placed against a wall; its branches are then compelled by shreds and nails to follow a course forced upon them by the often capricious will of the gardener. But Nature, though she appears to be awhile submissive, soon tires of undue restraint, and sickness and disease in the trees are the inevitable consequences of forcing her to abandon her accustomed habits.

The sketch herewith sent (*fig.* 5.) is that of a white nectarine tree, now growing in the gardens of the Honourable and Reverend George Neville Grenville, at Butleigh: this will illustrate my ideas of shape and form, and, from its age and size, your readers will be enabled to form some estimate of the merits of the plan. This tree was planted in 1810; it completely covers a wall of 12 ft. high, and extends to 44 ft. in width; its sides are of equal strength, and the curvature of the branches gives it a pleasing appearance. Its produce, when thinned to four fruit per square foot, will be from about 150 to 180 dozen; a quantity not unusual for it to bear.

I agree with Mr. Lindley [in his excellent *Guide to the Orchard and Kitchen Garden*] in recommending the annual

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* This seems to resemble Mr. Hayward's mode of training peach trees. See VIII. 653.

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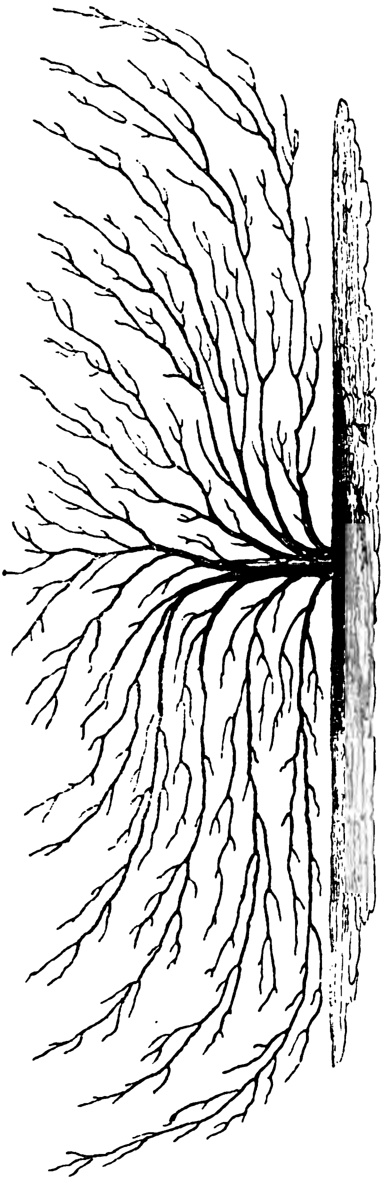

shortening of the young wood; for this is necessary to insure a succession of bearing shoots, without which the crops must be partial and defective. Indeed, I have practised the method of pruning approved of by that writer, and have nothing to add to his brief observations, but my entire concurrence in them.

The soil of the border in which the nectarine tree above referred to, and many others, were at the same time planted, is a strong loam; the border was made 12 ft. wide, 2 ft. deep, and the bottom paved with flag stones: no dung nor any manure was used in making the border, or at any subsequent period. Insects were particularly attended to, and, whenever they appeared, they were carefully destroyed. In dry weather the trees were washed with the engine twice, and sometimes three times a week. *Disbudding was practised;* no more shoots were left in the summer than were necessary for producing fruit the next year. The fork only was used for stirring the border (which was frequently done during the summer months), but in the winter it was slightly dug with the spade, and laid in ridges: no vegetables were sown or planted on it, except a few lettuce or endive near the walk. Whenever a luxuriant shoot or large branch was to be taken out, it was done in the months of June or July [so that the wounds made were always healed over before winter]. The trees, when in blossom, were protected by bunting: to effect this, boards six inches wide were fastened under the coping; to these boards iron rods were fastened: on these the bunting was suspended by rings; each piece of bunting was of the size of the tree; and in the daytime it was drawn from the sides to the middle, and fastened to the wall. This covering not only protected the blossoms, but the tender shoots also; and prevented the formation of those large blistered leaves, which are so destructive to the young wood, and which render it quite unfit for producing fruit. The trees being kept thin of wood, not more than four fruit, on an average, were left, at the final thinning, on a space of one square foot.

On the first appearance of the aphides, Scotch snuff was thrown on the extremities of the shoots; no curled leaf was removed before the snuff was laid on, nor until the shoot advanced in growth and had formed two or three clean leaves; the curled leaves were then taken off, and the tree washed with the engine.

Although so much has been written on the pruning, training, and management of peach trees, all that is necessary to be known may be reduced to a very few words, and carried into effect by any person who will attend to the following short directions: — Use a strong loam for the border; never crop it; add no manure; keep the trees thin of wood by disbudding, and the early removal of useless wood; shorten each shoot, according to its strength, at the spring pruning; elevate the ends of the leading branches, so that they may all form the same curvilinear inclination with the horizon: and, what is of the utmost importance in the culture of the peach, at all times keep the trees in a clean and healthy state. I remain, Sir, yours, &c.

Edward Callow.

Butleigh, near Glastonbury, Dec. 28. 1833.

Art. XIII. *A successful Mode of securing a Crop of Fruit on Pear Trees.* By Mr. B. Saunders, Nurseryman in the Island of Jersey.

Sir,

The fact that many disappointments are experienced by gardeners, and also by amateurs, in their endeavour to procure crops of many fine sorts of pears, is so well known, that it needs only to be mentioned to be assented to. The practical application of the following suggestion will, however, remove, in many instances, these disappointments, and insure good crops.

There are many varieties of pears, which, every year, blossom very abundantly; and yet, to the great disappointment of the cultivator, the whole of the flowers fall off without setting a single fruit, although the soil and situation may be very congenial, and every care has been taken in planting, &c. This is the case with the Duchesse d'Angoulême, and with many others I could mention. The trees of these varieties, according to my observations, devote the whole of their strength and sap to the production of a superabundance of blossoms; but, unless they are assisted by art, they have not sufficient strength to set their fruit. In order, then, to remedy this defect, and to assist nature as much as possible, I have adopted the following plan, with great success and satisfaction, for the last three years: —

Take a pair of scissors (such as are used for thinning grapes), and go over the corymbs of flowers, or rather of flower-buds, as soon as they are sufficiently elongated to allow the points of the scissors to pass between them (that is, some days before the blossoms are expanded), and thin them; leaving only five or six blossoms in each, according to the size of the corymb: always preferring to leave the flowers which have the stoutest stalks, and those which are nearest the centre. This operation has the effect of diverting the sap to the flowers which remain, and gives them sufficient strength to set from one to three fruits in each umbel; which will prove a sufficient crop, and well repay the labour bestowed. Another mode, less tedious than the above, is also practised here, with success, on young trees. It consists in deferring that part of the pruning of them which is termed shortening the young wood, until the blossoms are in about the same state as is described in the above directions for thinning, and then shortening them back to the required length. This also checks the progress of the sap, and enables the tree to set fruit very freely. I am aware that my plan is a tedious one, and one that is almost impracticable on a large scale; but it is decidedly an excellent plan for dwarf trees in gardens, whether they are cultivated in the *quenouille* mode, against walls, or as espaliers; as these trees come within the reach of the hand, of a pair of steps, or of a ladder. In the hope that these remarks may, through your indulgence, avail my fellow-labourers in horticulture, at the coming season, I am, Sir, yours, &c.

BERNARD SAUNDERS.

Nursery, Island of Jersey, Dec. 6. 1833.

WE recommend the above article to the particular attention of young gardeners. The system of disbudding advised in the preceding paper by Mr. Callow, and that of thinning out blossoms suggested in the above paper by Mr. Saunders, are applicable to all fruit trees; and, if generally adopted, would insure important results. We know an instance of a large apple orchard, the property of a commercial gardener in Kent, in which a knife has never been used: every thing is effected by disbudding, and pinching out young wood with the finger and thumb. The proprietor is not a scientific gardener; and he adopted the above practice from no particular theory, but simply from his own observation and experience, to save labour, and to insure good crops of large fruit. We hope to see his orchard next summer, and to report on it. — *Cond.*

Art. XIV. *On growing large Gooseberries for Exhibition.*

By Mr. M. Saul.

Sir,

In the year 1827, I sent you an account of the mode then practised in this county, of training gooseberry trees, so as to make them produce large show fruit. (See III. 421.) At that time, it was generally supposed that to obtain fine show gooseberries it was necessary to train the trees; and that, if so treated, in five or six years they would be found to have become strong, and would be sure to produce large fruit. The result of seven years' experience, however, proves that training is quite unnecessary. Gooseberry bushes are only found to produce fruit suitable for exhibition when they are four or five years old; because the fruit after that age decreases in size, though it increases in number. Gooseberries rarely, if ever, produce fruit of a very large size for more than two years together; and generally only one season. The mode usually now practised here is, to take a gooseberry tree out of the nursery in its second year. The next year (being the first after transplanting) it is not allowed to bear any fruit; but the year following, that is, in the fourth year of its age, it is in its prime, and will produce its largest and finest fruit. We seldom hear of the same tree producing equally fine fruit for even two years in succession: the Bumper, which produced the largest berry in 1832, weighing 30 dwts. 18 grs. (IX. 98.), this year (1833) did not produce any berry weighing above 22 dwts. 5 grs.; and many other examples might be given. [The weights of the largest gooseberries grown in 1833 will be found (in p. 96.) under the head of Provincial Societies.] There are fewer new gooseberries going out this season than last.

I am, Sir, yours, &c.

M. Saul.

Sulyard Street, Lancaster, Dec. 6. 1833.

Art. XV. *On propagating the Purple Broccoli from Slips, and on the Agency of Manure prepared from Sea Weed in improving various Vegetables.* By Mr. T. Rutger.

Sir,

On reading Mr. Kendall's article upon the propagation of cabbages from slips (IX. 226.), I feel inclined to draw the attention of your readers to the growing of purple broccoli in the same way; a practice which was adopted, some years since, in the west of Cornwall, and, for aught I know, may be still continued there. The variety thus treated seemed to be rather peculiar in its habits, and compact and handsome in its growth. The head being removed for culinary purposes, the method was to let the stump remain, which had already thrown out sprouts * below; and these, on being left to grow, showed no indication to form heads for that season. In the month of June, the sprouts were sufficiently advanced to be slipped off; and, after being exposed a day or two in the sun to cauterise the wound, they were planted out in the usual manner. In two or three weeks they had taken root, and in the course of the autumn made fine stocky plants. I have seen many instances of the broccoli thus grown having heads three feet in circumference, and as close and compact as possible; but this extraordinary luxuriance was, I believe, principally owing to the nature of the manure used.

This manure consisted principally of sea weed, of the genus *U'lva*, several varieties of which are drifted on the sands in immense quantities in stormy weather. The weed forms a principal article of manure to the farmers, as well as to the market-gardeners in the neighbourhood of Penzance and other parts in the west of England, and is sought with avidity by both classes after a heavy gale, it being found, from experience, to be an excellent manure for a single crop. The farmers in that neighbourhood mix it up with earth collected from furrows ploughed at certain distances in the field, and with sea sand, and, thus mixed, it rapidly decomposes, and soon becomes fit for use. The market-gardeners and cottagers frequently make use of it as a manure, in its raw state, for onions, potatoes, &c. For onions, the ground is so prepared, that, after a layer of it is spread over the surface, there may be a sufficient quantity of earth to cover it about two or three inches thick; after this has been levelled, the seeds are sown and raked in, and the produce, in many instances, is but little, if any thing, inferior in size to the onions imported from Lisbon. For potatoes, it is used either by putting a layer of it over the sets, whether in furrows or beds, and afterwards covering it with earth; or putting a layer of it first, placing the sets upon it, and then a covering of earth. In reference to the kidney potato, I think I may safely aver, that in no part of England are potatoes of this description to be found equal in quality to those grown in the neighbourhood of Penzance; where, by extraordinary labour and care, they are frequently brought to market from the open ground by the middle of May. The sort principally grown for an early crop is known there by the name of "the Yorkshire kidney." I am not certain if this be its proper appellation, but it forms a long, handsome, flattish, tuber, with the crown of a purplish hue.

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* The following fact evinces the capacity of broccoli for forming sprouts: — "Two dozen of broccoli, a dozen of which were very fine and fit for table, were, within the last few days, cut from one stem, grown in the garden of Mr. Lewis, nurseryman, of Chelmsford." (*Bury and Norwich Post*, May 29. 1833.) See also a notice of a broccoli plant which had stood six years, and produced good heads from sprouts every year, VI. 492. — *J. D.*

With regard to the broccoli noticed above, in the ordinary course of garden culture, it forms a head averaging about two feet in circumference; its flavour is excellent, and, as such, it may be well recommended to notice; more especially as, by its being propagated from slips, it is secured from any variation from its natural habit. I am, Sir, yours, &c.

T. Rutger.

Shortgrove, Essex, Oct. 1833.

Art. XVI. *On the Mode of securing a Supply of young Carrots throughout the Year.* By Mr. T. Rutger.

Sir,

In cases where young carrots are required all the year round, the following mode of culture will be found to answer in producing them.

In the first week of August, sow a crop of the short-horn kind in a cold frame, and a crop to succeed it in the third week of August, also in a cold frame, the latter of which will be at least two months after the first in coming in. Early in January sow a crop on a slow hot-bed, under glass; and early in February, on a slow hot-bed, under hoops and mats; in the succeeding months, sow occasionally in the open ground.

The above brief directions are, of course, sufficient, as there is no occasion for entering into details about soil, thinning, &c., which every one conversant with gardening knows: but perhaps a question may arise as to the necessity of sowing in frames in the month of August: it must, therefore, be understood, that these crops are to serve through all the winter; and, therefore, it will be found that glass will be of essential service, as the weather grows cold; and not only glass, but a covering of mats also will be necessary, during the night, in severe weather. One thing, however, must be attended to in the use of glass; namely, to be careful to give sufficient air at all times to keep the plants from getting drawn.

Abercrombie is, in my opinion, deficient upon the culture of this esculent for the purpose of having it young all the year round; and I much question if his method will answer fully in the most favourable situations, as to soil and climate, that Britain will afford. I remain, Sir, yours, &c.

Shortgrove, Essex, Dec. 1833. T. Rutger.

We have rectified Abercrombie's account in the new edition of our *Encyc. of Gard.* now publishing, § 4121. — *Cond.*

ART. XVII. *Remarks on the Cultivation of Sea-kale, as practised by the Bath Gardeners.* By WALTER WILLIAM CAPPER, Esq.

Sir,

PERHAPS the following peculiar method of cultivating sea-kale by the Bath gardeners may be acceptable to some of your readers. As this manner is apparently very unnatural, I am induced to preface it by describing the habits of growth of the plant, which grows naturally on the sandy shores of Sussex and Hampshire, and also many other places round the coast of England. The buds of some of these plants, during the winter, are subject to be covered several inches deep with the drifted sand, so that, in the spring, the young heads which push through it have their leaves quite close together. Their appearance, when in this state, being like small cabbages, must have first induced the inhabitants to eat them; and their delicacy and succulency, added to their precocity, must have ultimately led to their cultivation in gardens. This took place probably about the middle of last century. (See *Encyc. of Gard.* new edit. § 4299.) During my visit to Southampton last year, I saw sea-kale several times in the market which had been taken from the shore, but it was very inferior to that raised by the gardeners there.

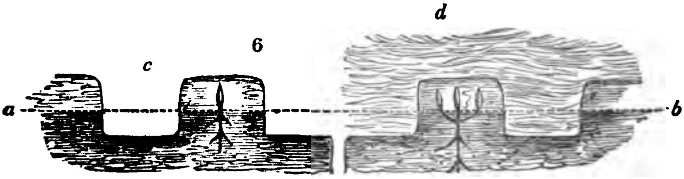
In the first volume of the *Transactions of the Horticultural Society* it is recommended, in a paper dated 1803, to grow sea-kale under large earthen pots: but these are very expensive, and difficult to manage; besides, the plants thus treated are not so productive as they are by the Bath method. My instructor in this method was Mr. M'Pherson, who cultivated a large garden opposite the South Parade at Bath; and, although it is upwards of thirty years since he taught me, I do not find that his method has been improved upon.

The seed is to be sown very thin early in April, on a bed of 4 ft. wide, which is to be kept clear of weeds during the summer. It is certainly the best way to raise your own plants; but, as a year is lost in so doing, I should recommend the owners of small gardens to procure them from some neighbouring nursery, as they will cost there only from 3*s.* to 5*s.* per hundred, and a season is saved. In taking them up, be careful that their roots are not broken, or dried by exposing them to the atmosphere; for in either case the plants will not thrive with so much vigour the following summer.

Having procured the plants in the month of March or April, select a part of the garden sloping to the sun: its breadth from east to west should be wider than its depth from north to south, that the rains may the sooner run off the ground. The soil should be light, and dug two spades deep, with a moderate quantity of rotten dung well intermixed. Particular attention should also be paid that every clod is well broken; for the roots run very deep. Then mark out the whole of the ground from east to west into divisions of 2 ft. 3 in. each; down the centre of the second and every other division put in the plants one foot apart: these divisions I shall call the beds, and the others the paths; but remember to begin with one path, and finish at the farther end with another, and put short strong stakes at the corners of every bed. During the summer these paths are to be dug over at least three times, to the depth of 10 in., in order to render the soil extremely fine; but, should it be of a close texture, then remove part of it, and bring, in the place of what you remove, an equal quantity of sand. On no account use riddled ashes, instead of sand; for their rugged surfaces injure the soft cellular vessels of all roots, and hurt their soft expanding leaves.

The plants will not be sufficiently strong, the second year of their growth after planting, to be worth forcing with hot manure; but they will be worth the trouble of covering with the soil from the paths: besides, they must be cut off to increase the number of their suckers. About the third week in February, when the weather is dry, mark out the paths 2 ft. 3 in. wide, and when the soil is finely broken, lay it upon the beds 8 or 9 in. thick; so that the beds and the paths, when covered, will appear like *c* in *fig.* 6. As spring advances, examine the plants by removing the soil with your hands, and when they are grown 7 or 8 in. high, cut them off a little below the bottom leaf: their heads will be found perfectly white, and all the leaves growing close together.

6



As you gather the heads, throw a little soil over their roots. Although the buds have grown in soil, very little will be attached to them; and this little is easily removed by plunging them into water, holding them by the upper end of the stem.

If the weather is settled about the end of April, the beds are to be entirely uncovered; this operation will appear to many to be most extraordinary; but it is essentially necessary, otherwise the few small heads that may be left uncut will go to seed, and injure the plant for the two following seasons. The gardener must take a sharp bright spade and commence at the end of each bed and throw the soil down into the paths, cutting off every head or parts that may be higher than the original level of the beds (in *fig.* 6. *a b*) before the soil was first placed upon them. The vital principle in the roots of the sea-kale is so great, that they cannot be injured by being cut through; as will be soon seen by the number of suckers or offsets that will arise from their roots. During this second summer, the beds must be kept free from weeds, and the paths dug as before, and the plants carefully examined, retaining only four or five of the largest suckers at regular distances round their stems. If the heads of these plants had been left uncut, every one of them would have gone to seed during the summer, and injured the plants for the two following summers; besides, by cutting them off, they throw up a numerous offspring, to select buds from for future growth. The following winter the plants are to be forced, and, before the frosts commence, the beds are to be covered with a little long litter, to prevent the frost from penetrating the soil. About the middle of December, remove the litter from that portion you intend to force, and cover the beds, as you did before, with the soil from the paths; then cover that soil 2 ft. high or more, and also fill the paths with hot manure, so that the whole may be on a level, as shown at *d* in *fig.* 6.

The following Directions are for the Third Year:—In about the fourth week the heads will be fit to cut: to do which, remove the manure with a fork, then displace the soil with your hands in a very gentle manner, otherwise the leaves will be broken, for they are extremely tender; cut the heads off a little below the bottom leaf, and cover the roots again with soil and manure to keep the frost from injuring them. In proportion to the number of beds, the period of forcing must be divided; but where they are numerous, and hot manure is to be regularly had in abundance, it might be wheeled upon the beds and paths as it is made, which will give a regular weekly supply: but, where no manure is to be had, the plants are to be covered with the soil, and gathered, as before mentioned. The plants, beds, and paths are to be managed exactly as they were directed to be during the preceding summer; but on no account suffer the beds to be raised even an inch above their original level, although the roots are become much thicker. They are still to be cut through with the spade where they are too high, otherwise the beds will be spoiled. After the manure and soil are removed from the beds during the third spring, dig up every other plant, leaving the others 2 ft. apart, and they will fully occupy the beds. Each individual plant during the third summer will consist of many stems, and each of these will send up many suckers: to retain the whole would not only weaken the plant, but would produce the sea-kale of diminutive growth; therefore leave only four or five of the strongest to each stem, and remove the rest: those retained will appropriate to themselves the nourishment of those removed, and become larger in consequence.

During the Fourth and future Years, the plants are to be managed according to the directions given for the third; but should too many stems arise from the main root, they must be cut off. As soon as the plants cease to produce abundantly, new beds are to be made; the seeds for which may be saved from a few of the finest plants, by leaving their heads entirely uncovered.

To dress Sea-kale. — Mr. Gibbs, the eminent pastry-cook and restaurateur at Bath, favoured me with the following method of dressing sea-kale:—Tie the sea-kale in bundles, boil it in plenty of water with a little salt in it, for 20 minutes, observing to let the water boil before it is put in; have a toast ready, dip it in the water, put it on the dish and the sea-kale upon it; pour a little white sauce over it, consisting of an equal quantity of veal gravy and cream thickened with flour and butter. If desired, a less rich sauce may be made by leaving out the gravy, and substituting milk for the cream.

I am, Sir, yours, &c.

WALTER WILLIAM CAPPER.

Hanley, near Malvern, Worcestershire, Dec. 12. 1833.

THE excellence of the sea-kale sold in the Bath market is well known. The specimen sent to us by Mr. Capper, two years ago, was of a very superior description; the heads were much larger than are usually seen about London, and much more succulent. We found it also much richer in taste when dressed. It is easy to conceive that sea-kale, grown in loamy manured soil, will have a richer taste than such as grows in a wild state among the barren sands of a sea-shore, or is grown in sandy soil in a garden. In the two latter cases, the soil must be deficient in the nutritive matter requisite to produce that degree of richness, joined to succulency, which is so desirable in this vegetable, and which the Bath gardeners succeed so well in producing. The Bath mode of growing this vegetable we have seen practised by some market-gardeners about Fulham, and also in some private gardens, but it is by no means so general as it deserves to be. Perhaps it may be alleged against this mode of culture that the thick covering of soil put over the plants will retard their progress in spring more than the usual coverings of sand, ashes, or blanching-pots; because the sun's rays will penetrate through the latter more readily than through the former: but, admitting this to be the case (which, no doubt, it will be, to a certain extent), the saving of the first expense and annual breakage of these blanching-pots, and the superiority of the article produced, will surely afford ample compensation for the retardation of the crop for a week or ten days. It will be seen that sea-kale can be grown in the Bath manner with the greatest ease at any season, by covering the rows with warm dung, more especially if that dung be partially or wholly protected from rain. — *Cond.*

REVIEWS.

Art. I. *Catalogue of Works on Gardening, Agriculture, Botany, Rural Architecture, &c., lately published, with some Account of those considered the most interesting.*

Rennie, James, A.M., Professor of Zoology in King's College, London, &c.: Magazine of Botany and Gardening, &c. In monthly numbers, 4to.

Having noticed this work (IX. 351.) on its first appearance, we should not have again recurred to it, but for the following letter from Professor Lindley, which we leave to speak for itself:—

"Dear Sir, In Berrow's *Worcester Journal* of the 28th Nov. 1833, I have been shown the following advertisement:— 'Published on the 1st of every month, the Magazine of Botany and Gardening, British and Foreign. Edited by J. Rennie, M.A. Professor of Zoology, King's College, London; *assisted by some of the most eminent botanists in Europe.* Each number contains eight plates of the most rare and valuable specimens of plants, executed by an eminent artist, and coloured from nature; also, sixteen quarto pages of *original matter.* The numbers already published contain a variety of articles by Professor Rennie, Colonel Capper, Professor Lindley, a valuable article on Botany by Mrs. Marcet, Professor Burnett, Sir Wm. Jardine, Mr. Jas. Munro, M. Adolphe Brongniart, Mr. W. Moorcroft, Mr. George Don, Mr. Jesse, Rev. John Fleming, M. Bremontier, Mr. Doyle, Dr. G. Johnston, Mr. Henry Marshall, Mr. R. Brown, Mr. John Donaldson, and many others of equal talent. London: published by G. Henderson, 2. Old Bailey, Ludgate Hill; and sold by all booksellers in town and country.'

"From the ingenious manner in which this is worded, it must doubtless be imagined by the public, as it was by the person who called my attention to the paragraph, that this *original matter* is furnished to Mr. Professor Rennie by those writers whose names he has made use of. But, as I am not ambitious of the honour of being considered one of this gentleman's contributors, I shall be very much obliged if you will be so good as to allow me to state, through the Gardener's Magazine, that no original matter whatever has been either supplied or promised to Mr. Professor Rennie by me. He has availed himself of some passages in works written by me, as he also has of others in the works of several of the writers mentioned in the advertisement; and this is, I presume, what is meant by being '*assisted* by some of the most eminent botanists of Europe;' but, if so, the public should understand it rightly. Yours, faithfully.—*John Lindley. January* 2. 1834."

Poynter, Thomas, Market-Gardener at North End, Fulham: The Cottage Gardener; being a Sketch on useful Gardening, designed for the Use of the Labouring Cottagers of England. Pamphlet, 8vo. London, 1833. 1*s.* 6*d.*

This is an excellent little work, which may be described as strictly practical, without pretensions either to theory or science. The author states, in his introduction, that he does not "presume to instruct the gardeners of noblemen and gentlemen," but to give a "brief sketch, as short and clear as possible, and at a price that may let it circulate in almost every cottage in England," of the "times, seasons, and methods of cultivating such articles as may be useful to English labourers." The work is arranged in two divisions: the first contains general observations "on cottage gardens, soils, cultivation, manure, and tillage, digging, hoeing, sowing, transplanting, propagation, layers, budding and grafting, sowing of seeds, weeds, and on the climate of England:" the second division contains a cottage gardener's calendar for every month in the year. There is an appendix, in three divisions: the first is on "cucumbers, cauliflowers, and sea-kale and blanching;" the second on "fruit trees and fruit shrubs, and their management;" and the third on "flowers and shrubs."

In the paragraph on "cottage gardens," the author gives the following, as what he would "choose," if he had a cottage to build and a garden to lay out:—"A four-roomed house, consisting of a kitchen, small parlour, two bed-rooms, wash-house, something of a cellar, and a pantry. The house should nearly front the mid-day sun. To the west, a cow-house and pigsties; at the eastern end, a tool and barrow shed; but situations may be such as to place these more advantageously elsewhere. For extent of garden, let us take our old Saxon king Alfred's allowance. A rood, or 40 square poles, of land, nearly facing the south or south-west; a gentle slope, if we can get it so; and if it is sheltered from the north, and particularly from the north-east, the better. Ten rods of land, well cultivated, will furnish a cottager's family, in the way in which it is now supplied, with vegetables: but I am thinking of helping to keep a cow, or goats, or a pig or two." (p. 8.)

The remarks on the different operations of culture, and especially on tillage, are grounded on the theory of Tull. The most valuable part of the work is the calendar, in which the author gives practical directions from his own experience.

The work may be described as calculated for those labourers who are rather superior to the common class. For labourers who can scarcely read, the best gardening tract yet produced is *The Practical Directions* (6*d.*) of Charles Lawrence, Esq. (VII. 216.); and for those who can read and think, and who have ground enough to keep a cow, and perhaps their own cottage to build, we would recommend, above all other works, Denson's *Peasant's Voice* (VII. 80.); and next to this, our own *Cottage Manual.* (VI. 292.) It gives us great pleasure to see tracts of this kind multiplied; because we feel certain that they must do immense good to the great mass of society. We expect shortly two similar publications, more scientific than any of the above, from the pens of Professor Rennie and Mr. Main.

Wallis, John, Timber-surveyor, Belvidere Road, Westminster Bridge Road, Lambeth: Dendrology; in which are facts, experiments, and observations, demonstrating that trees and vegetables derive their nutriment independently of the earth; and also observations on decay and defects in trees, together with a brief method of pruning. London, 1833, 8vo.

A piece of folly. To review the book seriously, would be like breaking a butterfly upon the wheel.

Wood, William, Nurseryman, at Maresfield, Sussex, and at the Barrière du Roule, Paris: A List of Roses. In a folio sheet.

The first list in this sheet contains 800 names, with short descriptions annexed to each, but which are not classed in any manner whatever. There are minor lists: viz., of 14 varieties of moss rose, with descriptions; 10 of the perpetual-flowering and hybrid roses; 31 of Noisettes; 14 of climbers; and 71 of China roses and their hybrids. It is also stated, that the nursery contains 123 sorts of the best Scotch roses, and 234 sorts of the best Dutch. Mr. Wood's nursery at Maresfield, of about 20 acres, which we visited in September last, is in a fine airy situation, and the soil is of a saponaceous loamy description; both of which circumstances are highly favourable for the growth of roses, and of nursery articles generally.

ART. II. *Literary Notices.*

A LIBRARY of Landscape-Gardening, edited by J. C. Loudon, is now in preparation, and the first number, in 8vo, price 2*s.* 6*d.*, will very shortly appear. This work will be comprised in three 8vo volumes (each complete in itself), which will be sold separately, or together, at 20*s.* each. The first volume will contain the whole of the Picturesque Works of the Rev. Wm. Gilpin, originally published in 14 volumes, at about 10*l.*, and now nearly out of print. The second volume will contain reprints, abridgments, extracts, or reviews, of all the British works on Landscape-Gardening, from the days of Shenstone to the present time, the cost of which, in separate volumes, would amount to nearly 100*l.*, and most of which cannot be obtained at any price, being out of print. The third volume will consist entirely of translations of works on Landscape-Gardening, from the French, German, and Italian, only one of which has hitherto appeared in English. Each volume will be accompanied by notes and graphic illustrations by the editor. The notes and graphic illustrations will have one single object in view, viz. that of illustrating the text as to the principles or practice of Landscape-Gardening and Architecture, and Taste or Criticism, as applied to these arts, or to rural matters generally. No miscellaneous notes will be admitted, and no attempt made to render the work what may be called an ornamental publication. Utility to young gardeners and architects, and to country gentlemen and amateurs of the rural arts, will be the editor's sole guide in making annotations himself, or in selecting those of others.

The great object of the editor, in producing this work, is to furnish a course of study preparatory to his *Encyclopædia of Landscape-Gardening*, in one volume 4to, which will contain a summary of principles, and an extensive series of designs, illustrative of their application to the laying out of every description of country residence, from the cottage to the palace. It was originally the editor's intention to publish this Encyclopædia first, and the Library afterwards; but, recollecting that it was chiefly through the perusal of the works which he intends shall compose the Library, and through sketching from some of the scenes therein described, that he acquired his own knowledge of Landscape-Gardening, he has determined on publishing the Library first, and the Encyclopædia afterwards.

The works of Gilpin will be published in the order in which they first appeared; commencing with the Essay on Prints; next the Observations on the Wye; then those on Cumberland and Westmoreland; and so on. Those contributors to the Gardener's Magazine, who may possess Gilpin's works, are invited to send notes; more particularly "An Amateur" (of Woodstock), Causidicus, Dendrophilus, Selim, J. F. M. D. (of Shrewsbury), and W. T. B. (of Coventry). — *J. C. L.* *Bayswater, Jan.* 1834.

The Architectural Magazine and Review; or Journal of Improvement in Rural and Domestic Architecture and Furniture, and in the Arts more immediately connected therewith; forming a perpetual Supplement to the *Encyclopædia of Cottage, Farm, and Villa Architecture and Furniture*; conducted by J. C. Loudon; will appear on April 1., and be continued quarterly: price 5*s.*, with numerous engravings on wood.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

THE Enjoyment of Reading. — We said a word or two on this subject in our preceding volume (p. 728.); and, on account of its great importance to every individual, we cannot help again adverting to it. We recommend those who have not taken in the *Penny Magazine* from its commencement, at least to purchase No. 95., for September 28. 1833. It is most gratifying to reflect that there is not a human being, endowed with health and the ordinary condition of the human faculties, that may not participate in what Sir John Herschel appears to consider the greatest of human pleasures. It is delightful to foresee that, when the whole of society shall be so far educated as to derive pleasure from reading, and when books are as common as bread and potatoes, the hardest-worked agricultural labourer or mechanic, when he goes home from his day's toil, may plunge at once into intense enjoyment by taking up a book. The most gratifying circumstance respecting this enjoyment is its universality, and its applicability to all countries, all future ages, and to every human being in tolerable health and above destitution. It is equally applicable to man, whether in prosperity or in adversity; whether in prison or free; and even, to a certain extent, whether in health or sickness. Another gratifying prospect anticipated from the result of universal reading is, universal improvement of worldly circumstances. Let any taste become general, and the regulations and habits of society will accommodate themselves to that taste. The hours of labour, at present, afford barely time for eating and sleeping; but when reading becomes a necessary of life to every, even the lowest, class of society, they will be reduced so as to afford time for that enjoyment also. Surely, if nothing else were to be gained by a system of national education, but the power of conferring so much happiness on millions, it would deserve the patronage of every benevolent mind, and be worthy the adoption alike of governments professing to be paternal or to be representative. But the main object which we have now in view is, to impress Sir John Herschel's statement strongly on the mind of the young gardener, so as to encourage him, above all other earthly things, to cherish a taste for reading in himself, and in all those with whom he may have any thing to do. Another point to which we wish to direct attention is, the necessity, when a national system of education is established, of adding to every school, not only a garden, a workshop for teaching the simpler operations of the mechanical arts, and a kitchen for teaching the girls cookery, but also a circulating library for the benefit of the whole parish. In furtherance of these objects, we cannot resist giving the following short extract from Sir John Herschel's address:—"Of all the amusements which can possibly be imagined for a hard-working man, after his daily toil, or in its intervals, there is nothing like reading an entertaining book, supposing him to have a taste for it, and supposing him to have the book to read. It calls for no bodily exertion, of which he has had enough, or too much. It relieves his home of its dulness and sameness, which, in nine cases out of ten, is what drives him out to the alehouse, to his own ruin and his family's. It transports him into a livelier, and gayer, and more diversified and interesting scene; and, while he enjoys himself there, he may forget the evils of the present moment, fully as much as if he were ever so drunk, with the great advantage of finding himself the next day with his money in his pocket, or, at least, laid out in real necessaries and comforts for himself and his family, — and without a headach. Nay, it accompanies him to his next day's work; and, if the book he has been reading be anything above the very idlest and lightest, gives him something to think of besides the mere mechanical drudgery of his every-day occupation, — something he can enjoy while absent, and look forward with pleasure to return to." . . . "If I were to pray for a taste which should stand me in stead under every variety of circumstances, and be a source of happiness and cheerfulness to me through life, and a shield against its ills, however things might go amiss, and the world frown upon me, it would be a taste for reading." (*Penny Magazine*, vol. ii. p. 375.)

Gate-stoppers are frequently found great annoyances, both in the approach roads to gentlemen's houses, at their entrance lodges, and also in garden and shrubbery walks. There is a most abominable one, for example, a few paces within the entrance to the garden of the Horticultural Society at Chiswick; which I, being a short man, and, like all short people, being generally looking up, have frequently nearly fallen over. Now, there is an excellent fall-down gate-stopper, invented by Messrs. Cottam and Hallen [*fig.* 7.], which you have mentioned in your Supplement to the *Encyclopædia of Agriculture*, and which only costs about a shilling, if of the least size, such as is suitable to a garden gate. There is also a most ingenious self-acting gate-stopper described in the *Quarterly Journal of Agriculture*, vol. iii. p. 236.; by which, the moment the half of the gate begins to be opened, the stopper begins to be lowered; and when the gate is wholly open, the stopper is level with the ground. This last is a Scotch invention, and must cost a good deal more than that of Messrs. Cottam and Hallen; but it is so ingenious, that I should strongly recommend its adoption in all pleasure-grounds. Messrs. Cottam and Hallen have promised me that they will procure one from the Kirkaldy foundery, where this last-mentioned gate-stopper was first made, and exhibit it in their museum in Winsley Street. — *J. S. B. London, September*, 1833.

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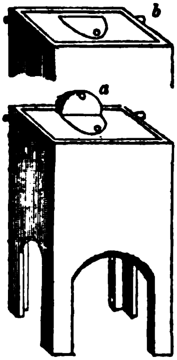

ART. II. *Foreign Notices.*

FRANCE.

The Garden of M. Boursault, in the Rue Blanche (IX. 145.), has undergone some important changes since you saw it in 1829, on account of the deranged state of the proprietor's fortune. The large green-house which ran along the highest part of the garden has disappeared, and its place is filled by an espalier of peach trees, with a trellis of vines, or rather festoons of vines formed by planting a row in front of the wall, about 10 ft. distant from it; and leading a shoot from the top of each prop to the top of the wall. The *Araucària* excélsa, the tub of which is sunk several feet deep in the earth, touches the top of the house, and wants room. The Wistària Consequàna flowers all the year round, and begins to bear seed. The greater part of the plants in this garden is now for sale, and I believe, even the land will be sold also. In the latter case I tremble for the existence of this admirable garden. — *L. L. L. Paris, July* 6. 1833.

The Nursery and Seed Business, as it appears to me, is in a better position here than in England; that is to say, it is progressively increasing, in consequence of the increasing interest taken in every thing relating to the improvement of the country, and especially of agriculture. The cultivators of ornamental plants are perhaps suffering a little; for, if it were not for some fashionable flowers, such as roses and georginas, they would not be able to support their establishments. One reason of this is, that they have increased in number amazingly within these few years. — *V. Paris, Dec.* 28. 1833.

The Country Seats between Havre and Rouen, which you recommended me to visit, I found in miserable order as compared with seats of similar extent in England. That in best keeping was Mailleraie, which was in about as good order as I have generally found Park Place, near Henley on Thames. Landin surpassed everything which I have seen in France. The elevated situation of the house, the noble bend of the river, its richly wooded banks, the extensive prospect over a flat country in front, and the island of fruit trees in the Seine, some hundreds of feet below the eye, all conspire to impress the mind with the most sublime emotions. One enjoys these feelings not the less by their contrast with those excited by the anxiety of the guide to point out seats and summer-houses. I asked to see some of the remains of the plaster of Paris shepherds and sheep; and a few fragments of the former, collected in the corner of a root-house, were pointed out as all that remained. At Rouen I found Prevost and Vallet in their respective nurseries, which were in tolerable order; but Calvert and Co. were gone. I was disappointed in the botanic garden, but it contains some fine old specimens, and, among these, I was most struck with the size of the Italian reed [*Arúndo Dònax*], which is well worth introducing more extensively into British pleasure-grounds. — *Henry A. Browne. Rouen, Dec.* 1833.

Steam-digging Machine. — M. Wronski, a celebrated mathematician at Paris, has, according to the Paris papers, discovered a new system of applying steam to carriages, digging machines, hoes, picks, ploughs, &c.; so superior to any thing hitherto known, that a French company has bought his patent for four millions of francs. (*Le Temps.*)

HOLLAND AND THE NETHERLANDS.

Agricultural and Botanical Society of Ghent. — The fiftieth exhibition of this Society will take place March 15th next. It is to be celebrated as a jubilee, and prizes are offered to strangers, as well as to members of the Society. Among the prizes are, a gold medal for the best collection of 20 or more plants in flower, and silver medals for the best collections of camellias and of amaryllis. Mr. Maddison of Wondelyem, about two miles from Ghent, who sent us a printed prospectus containing the above and a variety of other information, says: — "As many of the prizes are for strangers, it may, perhaps, be worth your while to publish the prospectus in your Magazine for February next. Should you or any of your friends feel inclined to visit Ghent during our jubilee, I should feel happy in being of service to them. I am known to Mr. William Dennis of the King's Road, to Mr. Gawie, who is now with Mr. Lowe at Clapton, and also to Mr. Knight of the King's Road, Chelsea. I cultivate principally pelargoniums and georginas; but any plants for the open ground, such as alstrœmerias, and such as recommend themselves by their beauty, are what I particularly seek after. Independent of my collection of English pelargoniums, I cultivate about 100 foreign ones, which I have received from Vienna and Paris; and, after the example of gentlemen in this country, I am always happy to offer them in exchange for other plants, either to gardeners or amateurs. Since residing in this country I have built a new green-house, with a span roof; and, by a very simple contrivance, I can raise the stand within a few inches of the glass. Were my green-house of iron, instead of wood, and warmed by hot water, instead of by fires, I should consider it as nearly, if not quite, the very best that could be made. I am, Sir, yours, &c. — *John Maddison. Wondelyem, near Ghent, Dec.* 10. 1833.

CAPE OF GOOD HOPE.

The Government Garden is undergoing various improvements, which, when completed, I shall send you some account of. In general, it may be observed, that a new stimulus to gardening and agricultural improvements has been given throughout the colony since the present governor came into office. Something also must be attributed to the increasing prosperity of Sydney and Van Diemen's Land, which are our principal foreign markets for cattle, sheep, and various descriptions of agricultural produce. (*Extract from a private Letter to D. B., dated Cape Town, Sept.* 18. 1833.)

Encyclopædia of Cottage, Farm, and Villa Architecture. — Sir, I have perused your *Encyc. of Cottage Arch.* with great pleasure. It is a book which has long been wanted. What would I have given for such a book when I first started in life: even now, at the eleventh hour, I am delighted with it. I regret that I was not in England at the time your work was in progress. If I had, I should have sent you one or two designs for small cottages, which I have been in the habit of thinking nearly perfect in their kind. One of them was very similar in its general plan to Sir Robert Taylor's beautiful villa at Richmond, only on a smaller scale. [We shall feel much obliged to Colonel Thomson for plans and elevations of small cottages such as he mentions, and to any of our readers, to whom an opportunity offers, for ground plans and elevations of Sir Robert Taylor's villa: both would be exceedingly suitable for our *Architectural Magazine.* Colonel Thomson next describes an improved roasting-oven, which will form an article in the first number of our *Architectural Magazine;* and one which, we think, will be of very great value to the public. He then concludes his letter with the following paragraph: —]

If you should deem these details useful to your numerous readers, you are at liberty to insert them in any future edition of your work; for there will no doubt be many. [The work is stereotyped; and, consequently, the number of impressions which may be taken being unlimited, no new edition is required. All corrections, additions, and improvements to the work will be given in our *Architectural Magazine,* which is intended to serve as a perpetual supplement to the *Encyclopædia of Architecture,* in the same manner as the *Gardener's Magazine* is a perpetual supplement to the *Encyclopædia of Gardening, E. of Plants,* &c.] My object [continues Col. Thomson] is general utility; and I know of no subject which will contribute so largely to the comfort and happiness of Englishmen all over the world, as a practical improvement in this branch of domestic economy, which may have the effect of overcoming in some degree that rooted prejudice in favour of long open kitchen ranges, which roast the poor cook as well as the meat, and consume as much coals in one day as would do the work of ten properly constructed furnaces. Wishing you every success in your useful career, I am, Sir, yours, &c. — *Robert Thomson, Lieut.-Col. Royal Engineers. Cape Town, Oct.* 30. 1833.

AUSTRALIA.

Swan River. — The vines in the botanic garden are flourishing luxuriantly; and the rapid progress the vine has made in the colony, wherever properly attended to, has established beyond a doubt that both the soil and climate are admirably adapted to its cultivation. We have not the slightest doubt that a peculiarly rich flavour would be imparted to the grape; if we may judge from the exquisite perfection of other fruits. It is much to be regretted that Waters, one of the most successful of the market-gardeners of Perth, has had his premises consumed by fire. He was in the habit of furnishing a regular supply to the Perth market. (*Morning Chronicle,* Dec. 27. 1833.)

Van Diemen's Land. — I send you a box of seeds, and should be glad to have some seeds or plants from you in exchange, &c. — *William Davidson. Government Garden, Hobart Town, Nov.* 2. 1833.

We have sent Mr. Davidson's letter with an order to get the box of seeds, to Mr. Lowe of Clapton, who, having a collector at Sydney, will be best able to ascertain what articles will be most suitable for Mr. Davidson, from whom we should be glad to receive an account of the state of gardening and agriculture, &c., in the colony. — *Cond.*

Art. III. *Domestic Notices.*

ENGLAND.

The Floricultural Impostor at Reading. (IX. 491.) — Sir, The following facts concerning this person may, perhaps, be of service to brother florists and nurserymen: — During last summer, a man of middle stature, rather stout, and shabbily dressed, called on me, and represented himself as a Mr. Archer of Sheffield, florist, soliciting orders. The man, by his general conversation, his apparent knowledge of floriculture generally, and his detail of several transactions of gentlemen, friends of mine, at Norwich (some of which I knew to be correct, such as certain flower-roots, &c., having been sent from Sheffield to these individuals, whose names he mentioned), succeeded in counteracting, in some degree, the unfavourable impression I had at first formed of him, from his shabby appearance; for which, by the by, he accounted by the plausible excuse of continued travelling, and having to visit so many customers in ordinary circumstances of life, who, he said, would be afraid of giving him orders were he dressed as a gentleman. I showed him over my nursery; and he particularly noticed the dwarfness of some of the georginas, of which he expressed great admiration. He examined my pinks and carnations, and continually referred to a catalogue which he had with him, that showed the number of prizes each flower had obtained in the year; and which, he said, he published annually: it appeared to be edited by a Mr. Archer. I gave him an order for some tulips, pinks, and carnations; upon condition, however, that I was to flower them before I paid for them. He also showed me some tubers of dwarf georginas, of, as he said, very valuable varieties, worth two guineas each, brought for the Duke of Marlborough; but, the duke not paying his last bill, he refused to leave them: but said, that, as the season for planting them was wearing away, he would not, as he wished to encourage all amateur florists, object to let me have them for a few shillings. So I purchased them, after consulting with a friend, who was present, as to whether the man was or was not an impostor. But the smallness of the sum to be risked induced me not to give a hint of my suspicion; for, although the man certainly played his game well, and possessed a very smooth tongue, there was, nevertheless, a something about him which created a doubt. The tubers were very neatly packed and labelled, and certainly had the appearance of being something choice. He also had tulip roots, labelled, &c., in the same style; but these, he said, were for a gentleman who had ordered them, and, therefore, not for sale. On going to the nursery the next morning, one of my foremen found eight or ten of the dwarf georginas (which, when growing the day before, the impostor had so much admired) with their tops cut from the roots, stuck into the ground, and the roots gone. Suspicion, of course, immediately attached to this fellow; and it was strengthened by my calling, a day or two afterwards, on a florist a few miles from Reading; and who questioned me respecting him, as he said that the man had called on him with some tulip bulbs and tubers of georginas, with the same tale respecting the duke as he had told me; and also stated that I had given him a 100*l.* order, &c., endeavouring, at the same time, to prevail on this person to purchase. He, not being a grower of tulips, declined doing this; and thought that there was something wrong with the tubers of georginas, as they appeared to him to have been in a growing state, and fresh taken out of the ground. He, nevertheless, gave him an order for some pinks and heartseases, which were to be sent in my parcel. This person keeps an inn; and the fellow, not having yet succeeded in his plans, proposed their going in and having dinner, &c., for which he would pay. Dinner was provided and eaten; and, afterwards, something as a "wetter" was introduced. In the course of the chat which followed, the fellow managed, under some pretence, to leave the room; and, I need scarcely add, did not return, but left the landlord to settle the reckoning. He entered his orders in a book, in which there appeared many names, familiar to me, of persons in this neighbourhood, who had, apparently, given him large orders. He made free use of your name, and of the names of several other gentlemen who had, he pretended, called at his nursery, &c. —*Myles Priest. Reading Nursery, Dec.* 12. 1833.

The Floricultural Impostor at Hereford. — This worthy of the *alias* family honoured a most respectable inn in this city, a short time ago, with his favours for several days; sallying forth amongst the brethren of the tulip as well as of the turnip tribe; soliciting orders, and exhibiting a nursery catalogue, together with a card on which appeared the words, "Joseph Ashworth, Florist, Rochdale, Lancashire;" and also a collection of flower-roots, in a violet-coloured bag, some of which he disposed of in this neighbourhood: though surely those were not a portion of what cost him five shillings per peck, as his price for one tulip, he stated, was fifty pounds. However, No. 43. of this Magazine (IX. 230.) awakened my suspicions, which I speedily laid before "mine host" (Mr. Wild); who, on inspecting his customer's bed-room, found he was gone. The landlord, with commendable alacrity, got a constable, and both rode off in the direction of Ledbury (16 miles hence); and, although two hours after the impostor at starting, came up with him just as he had commenced dispensing his favours at the Feathers Inn, in that town. Mr. Wild demanded and received his bill, which amounted to several pounds; and, moreover, as his Rosinante was knocked up, he required the amount of phaeton-conveyance great part of the way back to this city; which being paid likewise, Mr. Green, *alias* Gern, *alias* Ashworth, was rather unceremoniously excluded from the snug shelter of the Plume of Feathers. I should have mentioned that it was only the presence of the constable with Mr. Wild that enabled him to succeed so well, as this empowered him to say, "Pay me my bill, or you shall return with us to Hereford in custody." Many circumstances respecting the affair are quite amusing; but it would take up too much room to relate them. The fellow's memory is astonishing, as I have been told by several persons in this neighbourhood: gardeners who had lived in different situations, where he had called, years ago, he recollected well, though they had scarcely spoken to him before. Putting his barefaced lies out of the question, I never heard of so finished a character, or one so likely to succeed in his attempts to cheat. I am, Sir, yours, &c.— *Wm. Godsall. Hereford, Jan.* 1. 1834.

The Floricultural Impostor at Hull.— A person, calling himself Richard Evans, nurseryman and florist, of Edgbaston, near Birmingham, was in Hull last week, professing to sell the bulbs of tulips and ranunculuses of a superior description, with particular names attached to them. His custom was, to receive money for all roots under five shillings, and to give credit for those above, till after blooming. He succeeded in dealing with several of our florists; and, from one, obtained sixty tulips in exchange for fourteen of his own boasted superior ones. He has also taken orders for georginas; amongst others, from the curator of the botanic garden, which he visited. He appears to have a thorough knowledge of flowers, and knows the name of almost every florist in the kingdom. He has been at Sheffield, York, &c. He left Hull for Beverley on the morning of yesterday week, but forgot to pay for his lodgings. On Saturday he departed from Beverley, leaving a bill of 11*s.* 8*d.* unliquidated at the Packhorse. It is supposed that he has gone north through Scarborough and Whitby, where he knew there were florists' societies. He had a quantity of printed cards with him; and generously promised to leave three sovereigns as premiums for the Hull florists' shows. (*Weekly Dispatch*, Dec. 30. 1833.)

Vegetation under Glasses, without Change of Air.— Dr. Aiken, the secretary to the Society of Arts, read a letter addressed by Mr. N. B. Ward to Mr. R. W. Solly, in which the former states that, nearly four years ago, he observed, on the surface of some moist mould in a large bottle loosely covered with a lid, in which he had buried the chrysalis of a *Sphínx*, some minute specks of vegetation. A plant of *Pòa* ánnua and one of Aspídium had made their appearance. Curious to observe the growth of plants in such a confined situation, he placed the bottle outside one of his windows, with a northern aspect, where they remained more than three years; during which time the lid was never removed, nor was any water given to them in that period. The plants grew very well: the *Pòa* ánnua flowered the second year, but did not perfect any seeds; and the Aspídium produced four or five new fronds every year. They ultimately perished, in consequence of the admission of rain, which rotted them. The experiment has been repeated on more than sixty species of ferns, and with uniform success. The bottom of a box being previously covered with broken pieces of brick, tile, &c., the ferns are planted in a compound of vegetable mould, sand, and *S*phágnum palústre *L.*; they are then watered most copiously, and the superfluous water allowed to drain off, for several hours, by means of a hole in the bottom of the box. A plug is then put in tight, the box covered with a glazed lid, and no farther care is required than that of placing the box in the light. In this state, ferns will grow for years without any fresh water. A box placed on one of the Society's tables, and which attracted great attention, contained, among others, the following species: —*A*splènium lanceolàtum, *A*splènium *A*diántum nìgrum, *A*diántum pedàtum, *A*diántum pendulìnum, *B*léchnum boreàle, Cyathèa frágilis, &c.; with four or five species of mosses growing in the same box, planted in the beginning of last May. Mr. Ward adds, that many other plants which delight in humid situations, and which he had previously attempted, in vain, to grow in town, succeed equally well under this plan of treatment; such as the double-flowered *A*nemòne nemoròsa, Lístera nìdus àvis? &c.; and he feels well convinced that the deteriorating influence of town air depends more upon mechanical than upon chemical causes. (*Lit. Gaz.* p. 793., Dec. 14. 1833.) We saw some of the above-mentioned glasses and plants at the November Meeting of the Linnæan Society. — *Cond.*

The Establishment of a Botanical and Horticultural Garden at Sheffield (IX. 464. 700., X. 93.) will, we are informed on good authority, be shortly effected. The time for choosing a curator will, we believe, when determined on, be advertised. As the performance of the objects of any public body is dependent on its officers, and as, in the case of a botanic garden, a curator is the most important of all the officers employed, we trust we may be excused submitting a word in relation to the choice of one. We conceive that the candidates should be rigidly examined as to their professional qualifications; and that but little attention should be paid to any testimonials, farther than they relate to moral character. This last quality is of great consequence in a public servant; and, as its validity is dependent on length of practice, attestations of its fixedness may be well: but as, in the case of professional qualification, no evidences, no testimonials, would be equal to those which a competent examiner would elicit from the candidates themselves, we think it would be the duty of every committee, engaged in the choice of a professional officer, to institute, either in one or more of their own body, or in the person of a professor of established reputation, hired for the occasion, the examination suggested. This would completely set aside the chance of all undue advantage, which local candidates must, we think, have over the more distant ones. A curator of the present day should, we need not remark, be a proficient in every department of practical botany; and familiar with the principles of those sciences which are more immediately connected with the art of gardening. — *J. D.*

Brugmánsia suavèolens.—Sir, A magnificent plant of Brugmánsi*a* suavèolens flowered this year in the gardens of Roger Taylor, Esq., of Firsthwaite, near the Lake of Windermere. It was, when I saw it (Oct. 20.), 9 ft. in height, and presented 43 fully expanded flowers; the milky-white trumpets of which were each 1 ft. long (including the peduncle) and 6 in. in diameter at the upper part; emitting, at " dewy eve," a delicious fragrance. The diameter of the stem, at the ground, was 1½ in.; and its height to the first branch, 4 ft. The leaves upon this part were 2 ft. long, inclusive of the petiole, and 12 in. broad: but what is remarkable is, that all the leaves above the fork were decurrent on one side. The plant was raised from a cutting this spring; and, on the 4th of May, was 18 in. high. About the latter end of July, the flower-buds appeared, the plant being then about 7 ft. in height. Early in October, the flowers began to expand: the plant was now in full beauty, and continued so for nearly a month. — *T. A. B. Easthwaite Lodge, Lancashire, Dec.* 24. 1833.

Shrubs and Flowers in bloom on the 15th of Nov., 1833, at Easthwaite Lodge, Lancashire. — Fúchs*ia* grácilis, which I find to be perfectly hardy; the stem not killed down to the ground, but pushing out branches, in spring, to within a few inches of its top. One of these plants reached the height of 6 ft. this year, and was literally covered with bloom. The Warratah camellia also has resisted the frosts of the last four winters, without other protection than having the ground mulched about its roots. Irish heath, Colùtea arboréscens, Kálm*ia* serótina, *E*rìca *T*étralix and ciliàris, *A*'rbutus *U*'nedo, *V*ínca màjor, and *R*hododéndron pónticum.

Dec. 24. There is now a *R*hododéndron pónticum, with flowers upon it, in a sheltered situation; *V*ibúrnum *T*ìnus; *Yúcca* filamentòsa, a few flowers left out of 150, the stem was 5 ft. high; Hydrángea horténsis, rose-coloured and blue; *P*olýgala Chamæbúxus, *I*'lex virgínica, *S*pártium *s*copàrium *L.* (*C*ýtisus *s*copàrius *Lk.*), Cobœ'*a* scándens (*C*aprifòlium japónicum and sempervìrens), Calámpelis scàbra, *V*ibúrnum *T*ìnus hírta, *H*ypéricum *A*ndrosæ'mum, *V*erbèna *c*hamædrifòlia, Cydònia japónica, *D*áphne altàica, double sweetbriar, yellow Chinese rose, dark red Bengal rose, and about six or eight other varieties of Chinese roses; several varieties of Pelargònium; *R*òsa Champney*àna*, with trusses of fifty and sixty flowers in each; a Noisette grandiflòra (standard); a moss and some common roses, which were transplanted late in spring; *A*'nthemis nóbilis fl. pl., chrysanthemums, *G*èum coccíneum, *L*upìnus polyphýllus, Gíli*a* capitàta, nasturtiums, Lopèz*ia* coronàta and racemòsa, *A*thanàsia ánnua, *Œ*nothèra Lindley*àna*, and several others; *M*ímulus lùteus, Eschschóltz*ia* califórnica (rises from self-sown seeds), Ammòbium alàtum (the same), Biscutélla *e*rigerifòlia, *S*enècio élegans fl. pl., Campánula Trachèlium, *F*umària glaúca; *L*ýchnis, two or three varieties; *P*apàver, three or four varieties; *G*erànium Wallich*iànum*, *C*onvólvulus mìnor, Galinsòg*ea* trilobàta, Lobèl*ia* fúlgens, Agapánthus umbellàtus, *Màdia* élegans; georginas, many varieties; nigellas; lupines, many varieties; cyanus, delphinium; German stocks and asters, several varieties; Xeránthemum ánnuum, claries, wallflowers, Russian and other violets, hollyhocks, malvas, *A*'rabis alpìna; snapdragons, including a very handsome variety from New Holland; red candytuft, yellow hawkweed, a few pinks, several varieties of aster, &c.

This list would have been much more extended but for some severely frosty nights early in October; and the terrific gales of wind, and a deluge of rain, which we have lately experienced; which have torn up or beaten down a great number of my best flowers. — *T. A. B.* *Esthwaite Lodge, Lancashire, Dec.* 24. 1833.

Benthàmia fragífera. — By referring to our Floricultural Notices, p. 69, it will be found that specimens of the flowers and fruit of this eminently beautiful hardy evergreen shrub have been sent us from Cornwall. The general observer may form an idea of it by imagining *C*órnus flórida covered with the flowers of Stuárt*ia* Malachodéndron, and the fruit of *A*'rbutus *U*'nedo but rather larger. We want words to express our admiration of this shrub, and the interest we feel in the associations which are connected with it. It is named in compliment to George Bentham, Esq., the secretary to the Horticultural Society, a distinguished botanist; but we consider it as commemorating also the name of that gentleman's uncle, the greatest benefactor to mankind, in our opinion, that has lived since the commencement of the Christian era. We could not have desired a finer plant to perpetuate such a name. The Rev. W. Fox, in his admirable sermons on Christian Morality, says, "the late Jeremy Bentham was the ablest expositor of what was really Christian morality, the true law of the Lord as to social duty, that our country or the world has yet produced. The whole of his writings are proofs and illustrations of the position, that we shall find our own greatest happiness in the promotion of the greatest happiness of others." (p. 58.) Benthàm*ia* fragífera, beautiful as it is, is so easy of propagation, that it will soon be in every cottage garden. — *Cond.*

O'xalis crenàta. — We have received a number of communications, laudatory of this plant, as a substitute for, or an auxiliary to, the potato; as a tart plant; as an ingredient in salads; and even as an herbage plant for cattle: but having (IX. 78. 232. and 618.) afforded our correspondents an opportunity of saying enough to direct the attention of the public to it, so as to induce them to give it a fair trial, we think we have done enough for the present. In the course of our late tour we saw the *O'xalis crenàta* in many gardens, growing luxuriantly to stems and foliage, and producing few tubers, in very rich soils; and growing less luxuriantly, but still without producing many tubers, in dry sandy soils. The truth is, the tubers are not produced till a certain reduction in the temperature of the atmosphere checks the elongation of the underground stolones; which, when so checked, accumulate their sap in the form of tuberosities at their extremities: which tuberosities are, consequently, nothing more than stunted stolones or underground shoots. The demand for the plant has proved profitable to many nurserymen (IX. 470.); one of whom informed us that he had an order for a bushel of tubers. — *Cond.*

Grafting Pears on the Extremities of the Shoots of old Pear Trees trained on Walls, Mr. Saul informs us, is practised with so much success by an eminent clergyman in the neighbourhood of Lancaster, that the scions form blossom buds and spurs the same year that the graft is put on, and produce fruit the year following. The scions are inserted either on the points of the shoots, or the shoots are shortened back, according to the room there may be for the shoots produced by the scion; these shoots are either trained straight forward, or wholly, or in part, turned back towards the bole of the tree. More than this an intelligent gardener does not require to be told. — *Cond.*

Maclùra aurantìaca. — A fine specimen of this fruit has been sent us by Dr. Mease, from Mrs. M'Mahon's garden near Philadelphia, as before. (VI. 103. fig. 22.) It is about the size of a large orange, and though evidently gathered before it was fully ripe, yet the seeds, which may be compared to those of the common flax, only three times larger, are plump, and appear as if they would grow. We have distributed them, along with those which were sent us of Benthàm*ia*. — *Cond.*

The Sarracen Pear, a specimen of which has lately been sent to Mr. Saul from Mr. Saunders, nurseryman in Jersey, and which is not described in either the Horticultural Society's *Catalogue,* or in Lindley's *Guide,* is thus characterised:—It is oblong, about 4½ in. by 4 in. in diameter; the skin on the shaded side is at first green, but becomes pale yellow at maturity. The side next the sun is tinged with brownish red, dotted with grey: the flesh is almost melting, of a sweet, rich, and partially perfumed flavour; the seeds are long, pointed, not well matured, and of a black hue. This fruit is excellent, and will keep from one year to another. There are few pears which so highly merit cultivation as this variety. The specimen sent weighed 15 oz. — *M. Saul. Lancaster, Dec.* 6. 1833.

Uvedale's St. Germain Pear. — A fine specimen of this pear has been sent us by Dr. Hamilton of Plymouth: its dimensions are, "13½ in. for the transverse, and 16½ in. for the longitudinal diameter; and its weight is 1 lb. 11½ oz. The tree from which these pears were gathered has, in former years, produced fruit of a considerably larger size, and in much greater abundance, than in the present season, and five years since a pear was gathered from it which weighed above 2¾ lbs. — *William Hamilton.* 15. *Oxford Place, Plymouth, Nov.* 14. 1833."

SCOTLAND.

Modes of heating by Hot Water. — Mr. M'Nab, the excellent curator of the Edinburgh Botanic Garden, was on a tour in England in the month of December, with a view to ascertain, from ocular inspection, the best mode of heating by hot water. We had the pleasure of seeing him a few days before he left London, and, we believe, he considers, with us, that the best plan is Kewley's, provided manufacturers could be found to make joints as completely watertight as Kewley does, and to repair such pipes when they go wrong. The next best plan he also agrees with us in considering to be the level system, of which the most extensive manufacturers in the kingdom, we believe, are Messrs. Cottam and Hallen, of Winsley Street, Oxford Street. — *Cond.*

Horticultural Garden at Edinburgh. — A certain sum is to be given annually by government, under certain conditions, to improve this garden. (*Scotsman*, Dec. 21. 1833.)

Botanic Garden at Edinburgh. — The sum of 8000*l.* is expected to be granted by Parliament, next session, for the completion of the Edinburgh Botanic Garden. (*Scotsman*, Dec. 21. 1833.)

Agricultural Museum. — Professor Low, the scientific teacher of agriculture in the University of Edinburgh, has long been engaged in forming, at his own private expense, an agricultural museum; and we are most happy to learn, from the Scotch newspapers, that government has lent pecuniary aid to so useful an undertaking. Whether any exhibition of the kind instituted by Messrs. Drummond at Stirling, and followed by Mr. Lawson of Edinburgh, and Messrs. Dickson and Turnbull of Perth, is to be combined with this museum, we have not learned; but we are most happy to see the government of the country taking an interest in such national objects. We hope the time is not far distant when a sum will be advanced to complete the Thames tunnel, and another to establish the Horticultural Society's garden at Chiswick on a permanent footing. If this is not done by government, we hope that, when the metropolis and its environs are put under one system of self-government, they will have a metropolitan garden, either at Chiswick or elsewhere, worthy of the first city in the world, and open to all its citizens. — *Cond.*

In the Western Counties, the damage done to plantations from the violent gales of December exceeds anything of the like nature which has occurred during the last 20 years. Every landed proprietor complains of serious loss from this cause, and it seems not improbable that home timber will fall in price from the extraordinary quantity of it thrown on the market. At Castle Kennedy, near Stranraer, the residence at one time of the great Lord Stair, and where the trees were planted in sections, squadrons, and lines, after the order of some of his battles, the wind has demolished what the axeman had been long taught to spare; and this is merely a specimen of what has taken place at least all over this part of Scotland. (*Dumfries Courier.*)

IRELAND.

Gardening and Agricultural Improvements appear to have received a new stimulus in several of the Irish counties. We arrive at this conclusion from the accounts of newly formed societies, and superior productions, which we see in the Irish country papers sent to us; and also from the success which has attended the publication of an *Irish Farmer and Gardener's Magazine.* We have also been informed, both by a Dublin bookseller and by some of our publishers in London, that a great number of our *Encyclopædia of Cottage, Farm, and Villa Architecture* have sold in Ireland. Our particular friend James M'Lean, who has lately travelled through the country for commercial purposes, assures us that he has seen cottages erected between Belfast and Newry on platforms in our manner; but, Mr. M'Lean being no architect, this information must be taken with due allowance. — *Cond.*

Cúscuta *nepalénsis and Passiflòra edùlis in Ireland.*—Sir, Until the last week of last month, I had a large plant of *Cúscuta* népalensis in full flower upon an olive planted against a south wall: it was a beautiful object, and most fragrant, before it was killed into its roots, which it was by the fall of the thermometer to 25°. It had previously stood, with but little injury, two nights of frost at 29°. From the depth the roots of *Cúscuta* penetrate into woody plants, and its great vitality (which I have found from the difficulty of eradicating it from some plants it had accidentally established itself upon), I anticipate that it will retain its vitality over the winter, and will next year " string its pearls again." Close to it, on the same wall, stands uninjured a Passiflòra edùlis, with 12 fruits upon it nearly ripe, and some flowers expanded. It has been only protected at night by a mat. — *Robert Mallet. Capel Street, Dublin, Dec.* 1832.

ART. IV. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly Number containing eight plates; 3*s*. 6*d*. coloured, 3*s*. plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly Number containing eight plates; 4*s*. coloured, 3*s*. plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Sweet's British Flower-Garden; each monthly Number containing four plates; 3*s*. coloured, 2*s*. 3*d*. plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

Loddiges's Botanical Cabinet; each monthly Number containing ten plates; 5*s*. coloured, 2*s*. 6*d*. partly coloured. Edited by Messrs. Loddiges.

Some Facts and Considerations which have a general Relation to Floriculture.

Mr. Telfair is no more. — Ever since the death of his accomplished lady, which took place the preceding year, our valued friend, as he himself had informed us, seemed to have lost every earthly tie; and, after a violent illness of only five days, he breathed his last on July 14. 1833. In his death, science has to deplore the loss of one of her most ardent votaries, and society one of the best of men. (*Dr. Hooker*, in *Bot. Mag.*, Dec. 1833, t. 3286.)

The Publication of Loddiges's Botanical Cabinet was terminated on Dec. 2. 1833. — "Having been enabled to complete our twentieth volume, and thus to place 2000 plants before the public, our labours are closed; the precarious state of our draughtsman's health not permitting him to go on any farther. We cannot take leave of our kind friends without expressing our sincere gratitude for the encouragement with which they have favoured us, in our humble attempts to illustrate a small portion of a most attractive branch of natural history." (*Botanical Cabinet*, Dec. 2. 1833, at the close of the text appended to t. 2000.)

Mr. Drummond. — "It is very much through the instrumentality of Dr. Graham that Mr. Drummond has been enabled to accomplish his long and successful journeys in the southern states of North America; where, amidst many dangers, and notwithstanding the severest attacks of fever and cholera, he has amassed a collection of upwards of one thousand species of plants. The Nuttáll*ia* *P*apàver, and the little-known Sarracèn*ia* psittacìna, are among the most interesting that have been sent home in a living state. From Texas and New Mexico it is expected that his collections will be still more valuable." (*Dr. Hooker*, in *Bot. Mag.*, Dec. 1833, t. 3287.)

Mr. Hitchen's celebrated Collection of succulent Plants, of the more striking of which we have given a long list in IX. 114., has been purchased by Mr. Frederick Mackie of the Norwich Nursery. This gentleman has printed a list of the duplicates which he offers for sale; but we are happy to learn from him that it is his purpose "to keep the collection as complete as possible, and to add to it as opportunity may offer."

Aquatic Plants are generally very beautiful, either in their flowers or their foliage; or remarkable for the singular manner in which they have been constructed, to enable them to pass their lives amidst the water. Unless provided with floating apparatus, the small quantity of air contained in their leaves would be insufficient to support them on the surface of the water; and they would sink and drown, like animals themselves. But, to prevent this occurrence, we always find some curious and beautiful contrivance: such as a distention of the leafstalk, till it assumes a swollen and gouty aspect [in the genera Pontedèr*ia*, Tràpa, Utriculària]; or the construction of myriads of air-chambers in the solid stem itself [*T*ỳpha, *S*pargànium, Nymphæ̀a, Sagittària]; or the roots distended into vegetable swimming bladders [Jussieù*a*];

XCVI. Rutàceæ.

1311. ERIOSTE'MON.
gràcilis *Grah.* graceful ʭ ⊔ pr 1? jl? Li N.Holl. 1831. C p.l

A "rather graceful little shrub, with pendulous, twiggy, very leafy branches;" leaf two lines long, fleshy, semicylindrical; flowers ten lines across, terminal, solitary, freely produced. The whole herbage has a resinous perfume. E. grácilis is possessed by Mr. Cunningham, Comely Bank Nursery, Edinburgh. (*Dr. Graham*, in Jameson's *Phil. Journ.*, January, 1834.)

CXXIII. *Oxalideæ.* O'xalis crenàta (IX. 618.) will never answer for general culture. One of my plants was in flower as early as the middle of July. The plant is now 12 ft. in circumference: it was cut down, last week, with the frost. I put my spade under it, and did not perceive a tuber. I have taken up several plants that I struck from cuttings, and have found nothing but fibres. — *J. D., sen. Waterbeach, near Cambridge, Oct.* 17. 1833.

Mr. D. Beaton, gardener to W. Gordon, Esq., of Haffield, near Ledbury, Herefordshire, in a letter to Dr. Hamilton, Plymouth, on Oct. 4., states that he has "ascertained that the succulent stems of the *O.* crenàta are an excellent substitute for rhubarb in tarts; and agreeable, with full one third less of sugar than rhubarb requires, to the most fastidious palate." Also, that it, "when boiled with water till quite soft, and, after the water has been drained off, beaten up with new milk, makes an excellent dish for children, who, in general, appear very fond of it in that state." Mr. Beaton farther states that the herbage of *O.* crenàta, which is produced in prodigious abundance in light deep soils, is a superior green fodder for cattle in summer. "Cows, horses, and pigs eat it with avidity, after it has been given them two or three times: cows do not acquire a relish for it so readily as the others. The more the plant is cut, the more it grows."

Mr. Maund, in his *Botanic Garden* for January, has published a figure of *O.* crenàta, and offers numerous remarks in relation to it. We quote some of them: — "Its stems are tender, succulent, and admirably suited to the purpose of yielding a grateful acidity to salads [as suggested in IX. 618.]; as well as forming a delicious tart, which, probably, no one but ourselves has tried." [Mr. Beaton has, as is shown above. See, also, in p. 87.] Our next quotation, in part, answers the question suggested by Dr. Hamilton, in IX. 618.: — "We have boiled the tubers, and find them to be quite as agreeable as the potato: so similar, that they may be eaten without the difference being observed. When roasted, they indicate a deficiency of farinaceous substance; therefore, to give the comparison of nutritive matter contained in the potato and oxalis some decided shape, we have separated the starch and gluten from a like weight of each. We find that one avoirdupois ounce of oxalis produces 42 grains; whilst 1 oz. of potato, similarly treated, produces 106 grains." Mr. Maund has tried various modes of cultivating the plant. In the course and issue of these, he has noticed that stems, allowed to recline on the earth, have emitted tubers from their under side; and that others, about which a little earth had been drawn, have produced an increased proportion of tubers. He has accordingly suggested that the mode of culture which will induce the greatest productiveness may consist in laying the stems, and covering them to a shallow depth "with light rich mould, as they proceed in growth, leaving only, perhaps, 6 in. of the end of each shoot out of the soil; or, as no emission of tubers takes place till late in summer, the stems may remain spread out on the surface of the bed, in all directions, till about August; and then receive a covering of 2 in. thick of light compost, nearly to the ends of the stems. . . . Every stem is capable of being made productive." Mr. Maund states that "Mr. Cameron has observed some of the tubers of *O.* crenàta exposed to frosts; notwithstanding which, they vegetated in the spring."

CXXIX. Líneæ.

921. *LI'*NUM.
412*a* Cumíngi B. C. Cuming's ʭ ⊔ or ½ su Y Chile 1830. C p.l Bot. cab. 1996

A pretty little plant, introduced by Mr. Cuming. Its brilliant flowers are produced during nearly the whole of the summer. It requires the greenhouse. (*Bot. Cab.*, Dec.) Messrs. Loddiges, doubtless, possess the plant: Mr. Dennis does also.

CXXXI. *Passiflòreæ.*

1923. PASSIFLO'RA. § Decáloba *Dec.*
kermesìna *Lk. & O.* crimson (*sepals and petals*) ⌇ [△] spl 20 all sea C ... 1831. L r.l Bot. reg. 1633

"Brought from the Berlin Botanic Garden, to the London Horticultural Society's Garden, by Mr. Bentham, in the autumn of 1831; and it has been almost ever since in flower. It is, beyond all comparison, the most beautiful species in cultivation, except P. racemòsa. Its flowers have a richness of colour which art cannot imitate; they are produced in very great abundance, at almost all seasons; and, in consequence of the length of the slender stalks from which they singly hang, the whole plant has a graceful aspect, which is unrivalled even among passion-flowers. Unfortunately, it is propagated with considerable difficulty, no part of the stem striking from cuttings except what is very woody and completely formed; and this, which is always at the bottom of the stem, can scarcely be procured without cutting down the whole plant. Requires a hot and damp stove." (*Bot. Reg.*, Dec.) The leaves are three-lobed, green above, of a wine colour beneath.

PASSIFLO'RA. § Dysósmia *Dc.* [Bot. reg. 1636
gossypiifòlia *Desv.* Cotton-tree-lfd. ⌇ [△] cu 8 au W W. Indies, Mexico, Lima 1831. C r.l
Synonyme: "P. hibiscifòlia *Dec.* Prod. iii. 331." (*Lindley.*)

A herbaceous perennial species, requiring the stove in Britain. Its flowers (white) are not showy or very large; and its leaves not striking, but illustrate the plant's specific name, in showing a resemblance to those of the cotton tree. The green-stalked glands of its leaf-stalks, and of its airy pinnate involucres, are beautiful objects. (*Bot. Reg.*, Dec.)

By misapprehension or oversight, all the species of Passiflòra, *Murucùia*, and *Tacsònia*, in *Hort. Brit.*, p. 269, 270., are marked as evergreen twiners (⌇): none of them entwine, all climb and are evergreen (⌇).

CXLVI. Galacíneæ.

3450. FRANCO'A.
†28871 ramòsa *D. Don* branched-*inflor.* ♃ △ 1 or 2½ jl.au W Chile 1831. S p.l Sw.fl.gar.2.s.223

This pretty species is figured from Mr. Knight's nursery, Chelsea. Its white flowers are smaller than those of F. appendiculàta, which are of a pink colour; but they are, perhaps, more numerous, and the branched inflorescence presents them more amassed. F. ramòsa grows abundantly on the hills near Valparaiso, in Chile. In Britain it thrives in a mixture of sandy peat and loam, and perfects an abundance of seeds. (*The British Flower-Garden*, Jan.)

Of F. appendiculàta, Dr. Lindley has published a figure in the *Bot. Reg.* for Jan., and pronounces this and F. sonchifòlia to be identical; and states that "F. ramòsa would have but slender claims to being preserved [in the rank of a species], if it were not for the absence of pubescence from its inflorescence."

MONOPETALOUS DICOTYLEDONOUS PLANTS.

CLXX. *Ericeæ.*

1341. ANDRO'MEDA. [L s.p Bot. mag. 3286
†11044 salicifòlia *Commerson* Willow-lfd. ♄ ⊔ 12 or 3? my P.Gsh Mauritius, Madagascar 1828?
Hitherto we possess only figures [of this species] made from native specimens." (*Dr. Hooker.*) If this be the fact, A. salicifòlia *Wat.*, of *Hort. Brit.* No. 11044., is a distinct species or variety. That this latter is a distinct species is probable from Mr. Sweet's referring it to the genus Lyònia. See his *Hort. Brit.*, ed. 2. p. 331.

Introduced, from the woods of the Mauritius, by the late Mr. Telfair, into the garden of the late Robert Barclay, Esq.; and thence to the Birmingham Botanic Garden. The flowers borne by the specimen received by Dr. Hooker, in May, 1833, were of a greenish hue, "partaking little of the fine purple so remarkable in drawings from living native specimens." The species in Britain "needs the protection of a warm green-house." The flowers are produced in terminal and lateral racemes. The glabrous lance-shaped leaves are white beneath. (*Bot. Mag.*, Dec.)

CLXXIV. *Campanulàceæ.*

611*a* PETROMA'RULA *Pers. & A. Dec.* (*Petra*, a rock, *maron*, an herb; habitat.) 5. 1. Sp. 1.—
5172 pinnàta *Pers.* winged-*lfd.* £ ⌊△⌋ or 3 au Pa.B Candia 1640. D r.l Sw.fl.gar.2.s.194
Phyteúma pinnàtum *W.* and others; *Hort. Brit.* No. 5172.

This very rare and very interesting species is figured from Messrs. Young's nursery, Epsom; where, under the judicious and skilful treatment of Mr. Penny, "planted in the open ground in May, in rich loamy soil, it grew vigorously, and threw up from 40 to 50 stems, which began to blossom towards the end of August." P. pinnàta "is frequent on the rocky shores and mountainous parts of Candia, and also on Mount Baldo in Italy." A consideration of the probable circumstances of these localities may explain "the great difficulty attending the cultivation of the plant in this moist climate," and may suggest means to surmount the difficulty. "In Britain it requires, in winter, the protection of a frame or green-house. It may be increased slowly by division." (*The British Flower-Garden*, Jan.)

CLXXV. *Lobeli*àceæ.

609. LOBE'L*IA* 5113. pubérula.
2 glabélla *Hook.* smoothish-*herbaged* ♃ △ or 3 jl.au B.P Louisiana 1832. D p.l Bot. mag. 3292

"This is a highly interesting addition to our garden lobelias, and was introduced last year by Mr. Drummond, who sent the seeds from Jacksonville in Louisiana," we suppose to the Glasgow Botanic Garden. "Its nearest affinity is perhaps with L. syphilítica, but its inflorescence is less dense and vastly more elongated [1 ft. long], its flowers smaller, of a brighter colour.... Corolla bright purplish blue." (*Bot. Mag.*, Jan.)

odoràta *Grah.* fragrant-*flwd.* ♃ ⌊△⌋ fra ½ aut W Buenos Ayres? 1832. D p.l

It possesses but little beauty, beyond that of a lively green tuft of herbage: its perfume, which resembles that of the blossoms of the hawthorn, is remarkable in the genus. Mr. Neill of Canonmills has raised the plant from seeds sent to him by Mr. Tweedie. (*Dr. Graham*, in Jameson's *Phil. Journal*, January, 1834.)

CLXXXVI. *Compósitæ.*

2337. *A*'STER 21309 puníceus.
2 demíssus *Lindl.* dwarf ♃ △ or 2 au B English gardens 1820? D co Bot. reg. 1636

"It is a very compact herbaceous plant, not exceeding 1½ or 2 ft. in height, with very pale green leaves, and a corymbose inflorescence comprehending masses of bluish flowers, which appear in August, long before those of the true *A.* puníceus. It is among the handsomest of the genus." It is in the London Horticultural Society's Garden, and in the Liverpool Botanic Garden. (*Bot. Reg.*, the figure in December, the text in January.)

2409. HELIA'NTHUS. Subgenus Leígh*ia* Cass.
specidsus *Hook.* showy-*inflor.* ○ or 5 s.n R Jorullo? 1833. S co Bot. mag. 3295

Dr. Hooker, who has named the plant as above, is not certain of its affinities; he suspects that it may be a species of Tithòn*ia*. It is, apparently, a very ornamental, and, therefore, very desirable plant. To Mr. Edward Leeds of Manchester, who has lately commenced business there as a nurseryman and florist, W. Higson, Esq., of Manchester, sent a packet of seeds from the Botanic Garden, Mexico. From them have arisen, under Mr. Leeds's care, several species of plants not known in the neighbourhood of Manchester. Among them, from seeds labelled "Compósita speciòsa," arose the plant figured, and named by Dr. Hooker Heliánthus speciòsus. "Only one seed vegetated;" consequently, only one plant has flowered, and this "an unfortunately early frost has cut completely off:" therefore the plant is, very probably, lost to the country. It appears that it is an annual, large, bushy, and in outline conical, with large leaves, the earlier and lower undivided, the later and upper deeply divided, and three-lobed. The head of florets (the flower) is, by the picture, about 3 in. across, and the rays of a red or orange red colour

"The first head of flowers (flower) which appeared was at the termination of the main branch, and quite erect, and afterwards each lateral branch threw out a flower at its extremity, rather in a horizontal direction, the end of the flower-stalk inclining upwards." (*Bot. Mag.*, Jan.)

Cephalóphora glaúca *Cav.* — I would recommend this annual to attention, not for the beauty of its flowers, for they have no conspicuous beauty, but for the delightful fragrance of its herbage: it resembles that of a ripe melon. The whole plant is, even its seeds are, fragrant; and a little of it put amongst clothes gives them a most agreeable perfume. I would have this generally known, that the plant, which, though not showy in its flowers, is an interesting one, may be more generally cultivated. It requires no particular treatment: raise it on a hot-bed in spring, and plant it out when up. — *G. M. Elliott. Coul, Sept.* 18. 1833.

CXCI. *Córneæ* Dec. Benthàm*ia* fragífera. (IX. 367.) Mr. John Roberts, gardener to J. H. Tremayne, Esq., of Heligan, St. Austle, Cornwall, most kindly sent us, on Dec. 26. 1833., specimens, bearing ripe fruit, leaves, and flower-buds, of this newly-introduced and highly interesting hardy evergreen shrub. Mr. Roberts is the person who has the happiness to be the first who raised this plant; with whom it flowered for the first time in Europe, and who supplied the specimens from which the drawing published in the *Botanical Register* was taken. His plant of Benthàm*ia* fragífera is 16 ft. in height and covered with fruit. It has been out in the open ground for eight years, without any protection, not even a mat. It is planted in stiff clay, and at a great elevation. The forward state of the flower-buds on the specimens, suggest that the flowers of the plant are displayed early in the year; though, we presume, not so early as those of the Córnus máscula: the leaves of Benthàm*ia* fragífera resemble, a good deal, those of the *C.* máscula; but are, we think, more elegant. The involucral leaves, which first defend, and then garnish, the heads of flowers, are large and showy; as is evinced in some dried specimens which one of Mr. Roberts's assistants had given him to send us. The heads of ripened fruit are orbicular, depressed, more than 1 in. across, of a tawny red, and on a peduncle 3 in. long. A bush studded with these, partly pendulous by their weight, and abounding in its neat green glossy leaves, must be, in a bright autumn day, a very lovely object. We have distributed the seeds, obtained from the fruits sent by Mr. Roberts, to botanic gardens and nurseries. The shrub, it is stated in the *Floricultural Cabinet,* may be increased by cuttings, planted in loam under a hand-glass.

CXCV. A*sclepià*deæ.

775. MARSDE'N*IA*.
flavéscens *Cun.* yellowish-*flwd.* ⸸ ☐ fra? 20? jn.au Ysh N. Holl. 1830? C s.l Bot. mag. 3289
Nearly allied to M. viridiflòra *Br.*

Discovered by Mr. Allan Cunningham on the sea-shore at the Illawana district, in lat. 34½°, New Holland, whence he introduced living plants of it to Kew, where they flower throughout the summer months. The figure exhibits a twining branch, which bears opposite petiolate lanceolate leaves waved at their margin, and stalked axillary cymes of green flowers whose corollas are wheel-shaped. (*Bot. Mag.*, Dec.)

778. CEROPE'GIA.
Lúsh*ii* Grah. *Dr.* Lush's ⸸ ⊠ cu 8? s Lead Bombay 1833. O pl

Leaves lanceolate-linear, on short petioles; peduncles axillary, cymose; corolla ¾ in. long, leaden-coloured, and glabrous on the outside, deep purple, and slightly hairy within. This plant flowered in a stove in the Royal Botanic Garden, Edinburgh, in September, 1833. Dr. Graham received it, in February, 1833, from his "friend, Dr. Lush of Bombay." (*Dr. Graham,* in Jameson's *Phil. Journ.*, January, 1834.)

CXCVII. G*enti*àneæ.

464. VILLA'RS*IA*.
chilénsis *B. C.* Chilian ⸸ △] or 1 jn Pa.Y Chile 1832? D r.l Bot. cab. 1904

"Has been very lately introduced.... The flowers are very pretty, and open a few at a time, in succession, each lasting but a short while." (*Bot. Cab.*, Dec.)

CC. P*olemoniàceæ.*

499. GI'LI*A*. { Ipomópsis.
aggregàta *D. Don* tufted-*inflor.* ⊡ or 3 jl S N.W. America 1822. S and C s.l Sw.fl.gar.2 s.218
G. aggregàta *D. Don* in Edinb. Phil. Journ., 1822; *Cántua* aggregàta *Ph.*; Gíli*a* pulchélla *Dou.*; Ipomópsis élegans *Lindl.*
This is the plant noticed by the name of G. pulchella in IX. 705.: G. aggregàta is the name which proves to have been anteriorly applied.

"When G. aggregàta is in blossom, few plants of this family surpass it in beauty. It is very nearly related to G. coronopifòlia, but they are botanically distinguishable. G. aggregàta is figured from Mr. Knight's collection. (*Brit. Flow. Garden.*, Dec.)

CCIX. *Gesnèreæ.*

1698. GE'SNER*A*. (Dr. Lindley has thus spelled the word. Gesnèr*ia* is more usual; but, perhaps, not so proper.)
15532*a* Súttoni Booth *Capt.* Sutton's ⚘ △ or 2 jl S Rio Janeiro 1833. C r.l Bot. reg. 1637

"Introduced by Captain Sutton, who found it growing in a wood; its beautiful flowers attracted his attention, and induced him to dig up the plant and bring it home. On his arrival in England, in March, 1833, he presented the choice collection which he had formed of orchideous and other interesting plants, to Sir Charles Lemon, Bart., and Geo. Crocker Fox, Esq., Grove Hill, Falmouth; in the garden of the latter, G. Súttoni flowered in July, under the judicious management of Mr. Friend. It bears some resemblance to G. bulbòsa, but is evidently distinct from that species, differing from it in foliage, and its flowers are larger, and have a broader outstretched upper lip." (*Wm. Beattie Booth, A.L.S.*, who has described, drawn, and named the plant, as published in the *Bot. Reg.*, Dec.)

CCXVII. *Bignon*iàceæ. Bignòn*ia* venústa. Of this superb climber two most striking specimens, abounding in clusters of brilliant orange-coloured tubular blossoms, 2½ in. long, were sent us on Jan. 2. 1834, from the stove of Robert Trevor, Esq. of Tingrith, near Woburn, by his excellent gardener, Mr. George Phillips. This charming plant was first figured in the *Botanical Register* for Jan. 1818, iii. 249., and from a plant which had flowered in Lord Liverpool's residence at Coombe Wood. At the date mentioned the plant was also in the nursery of Messrs. Whitley and Co., Fulham, and that of Mr. Colvill, Chelsea. Now it is, we trust, more common; for its ready growth, and extreme beauty when in blossom, render it, at least one of, the most desirable of stove climbing plants. We have been favoured by Mr. Phillips with the following facts on his practice in the culture of it: —

"B. venústa appears to like free scope for its roots. We have here two flowering plants, which are planted in the back corners of the bark bed, in boxes 1 ft. square and 5 ft. deep, formed of perforated boards, and filled with a mixture of sandy loam and leaf mould. The roots have passed out of the boxes into the decayed bark of the bark bed, in which there is always a gentle heat, and in which they grow and spread very freely. We water liberally with the drainings from the hot-beds and rain water. The plants are trained perpendicular with a single stem, now 3 in. in girth, to the points where they touch the rafter; and to this point the branches, when they have done flowering, are always cut back, while at the same time the bark bed is renovated and the roots reduced. When the grape vines are in this house we train the bignonia along two wires close under the rafters, over the path, a foot from the glass. When the grape vines are taken out we lead the shoots of the bignonia down the rafters; and, in its flowering season, it may be said to cover the whole house; and it has a most splendid appearance. In 1831, 1832, the B. venústa began flowering on Oct. 3.; in 1833, two or three weeks later. It continues blossoming between three and four months, and some of the finest specimens have upwards of 70 flowers in a corymb. A branch introduced into the green-house has flowered sparingly. Cuttings of the young shoots when about 9 in. long will strike root freely in a hot-bed."

CCXX. V*erbenàceæ.*

1749. ***V*ERBE'NA.**
sulphùrea *D. Don* sulphureous-*corollaed* ♃ △| or 1 au Su Chile 1832. C s.l Sw.fl.gar.2.s.221
" Nearly related to *V.* crithmöides and radicans of Gillies and Hooker."

Stems many, procumbent. Leaves deeply pinnatifid. Flowers of a sulphur colour, larger than those of *V.* multífida, thickly arranged in a capitate spike. *V.* sulphùrea is figured from the collection of W. Christy, jun., Esq., Clapham; in whose collection it flowered in August, 1833. The plant is, apparently, perennial, and forms a close spreading patch. It appears to prefer a loamy soil, and grows luxuriantly in the open border during summer, but requires the protection of a pit or frame in winter. Cuttings of it root very readily. (*The British Flower-Garden*, Jan.)

MONOCOTYLEDONOUS PLANTS.

CCXXXII. *Commelíne*æ.

1000. **TRADESCA'NT*IA*.**
8189a pilòsa *Leh.* hairy-*herbaged* ♃ △ cu 2½ aut B.P Louisiana 1832. D co Bot. mag. 3291

This is closely related to T. virgínica and T. subáspera, "from both of which it differs in the extremely hairy leaves and flower-stalk, and calyxes, and in the smaller flowers; and from T. virgínica var. pilòsa *Lindl.* by the very hairy (not simply ciliated) and vastly broader and shorter foliage. From Dr. Lehman's T. pilòsa it only seems to depart in the absence of glands on the pedicels and calyx." The flowers are "numerous, produced in terminal umbels from the axils of two opposite bracteas. The petals, filaments, and hairs of the filaments, are of a bright purplish blue; anthers yellow." Sent by Mr. Drummond to the Glasgow Botanic Garden. (*Bot. Mag.*, Jan.)

CCXXXVIII. *Amarylli*deæ.

963. **AMARY'LLIS.**
7966a kermesìna *Booth* carmine-*perianthed* ɤ [△] or 1 ... Car Brazil 1833. O l.p.s Bot. reg. 1638
Synonyme. It appears to rank next to A. ádvena *Bot. Reg.* t. 1125. fig. 1., and A. intermèdia *Bot. Reg.* t. 1148.; but is perfectly distinct from both, and, indeed, from any species with which we are acquainted. (*W. B. Booth.*)

A beautiful species, introduced by Lieut. Holland of the Royal Marines. Miss Street of Penryn, to whom Lieut. Holland presented bulbs of it, possesses the plant from which the figure and description have been derived. Herbage glaucous; scape about 1 ft. high; flowers pediceled, 3 or 4 in the umbel; perianthium suberect, about 2½ in. long, funnel-shaped, slightly bell-shaped, of a deep carmine colour, marked with darker veins. The figure and description are communicated by Mr. W. B. Booth. (*Bot. Reg.*, Jan.)

979. **ALSTRŒME'R*IA*.**
versicolor *R. & P.* various-cld. (*sepals*) ж △| spl 2 jn O.spot Chile 1831. D l.p Sw.fl.gar.2 s.20
aurantìaca *D. Don*, Gard. Mag. ix. 622.
On this synonymy, Mr. D. Don has offered this remark in the *British Flower-Garden* for Dec. 1833, at foot of t. 220.: — " We are now satisfied of our A. aurantìaca being identical with A. versicolor of Ruiz and Pavon; which name must [as it is of earlier date], therefore, supersede that which we have applied."

CCXXXIX. I*rídeæ.*

148. **LIBE'RT*IA* Spr.** (*Mademoiselle M. A. Libert de Malmedy*, a Belgian; " femme véritablement savante et modeste," to whom the French flora is indebted for a great number of new and interesting species.) 16. 1. Sp. 4.—
Synonymes. This genus was separated from Sisyrínchium by Dr. Brown, who gave to it the name of Reneálm*ia*: a name applied by Linnæus, but subsequently suppressed by Smith, to some or all of the species of the modern genus Alpíni*a*; but as the genus Reneálm*ia* has been restored, upon good grounds, by Roscoe, it becomes necessary to adopt, from Sprengel, the appellation Libért*ia* for the genus of Brown, which is a most natural one. The Libért*ia* of Dumortier is Hósta of Trattinick, and Fúnk*ia* of Sprengel; and Libért*ia* of Lejeune scarcely appears different from Brown's [? from *Brò*mus]. (*Dr. Hooker, Bot. Mag.* 3294.)
Libért*ia* Spr., Reneálm*ia* R. Br., Næmatostigma *Dietrich.* The Libért*ia* of Lejeune, or Michelàr*ia* of Dumortier, is considered, with good reason, to be a *Brò*mus. (*Dr. Lindley, Bot. Reg.* 1630.)
†1368 grandiflòra *R. Br.* large-flowered £ △| or 1½ ap W N. Zeal. 1822. D p.l Sw.fl.gar.2.s.64
[Bot. mag. 3294
1368a formòsa *Grah.* handsome £ △| or 1½ my W Chiloe 1831. D p.l Bot. reg. 1630
†1369 paniculàta *R. Br.* panicled £ △| or 1½ ap.au W N. Holl. 1823. D p.l
†1370 pulchélla *R. Br.* pretty £ △| or 1 ap.jl W N. Holl. 1823. D p.l

That distinguished collector of plants, and other productions of nature, Mr. James Anderson, found Libért*ia* formòsa in Chiloe, and growing on the sea-shore within reach of the waves. He communicated seeds of it to Mr. Low of the Clapton Nursery, from which have arisen the plants figured. The picture in the *Bot. Reg.* is from a plant which flowered in Mr. Low's nursery; that in the *Bot. Mag.* from a plant which has "flowered beautifully in Mr. Cunningham's nursery, at Comely Bank, Edinburgh." The leaves are linear, sword-shaped, and nearly all radical. The stem, unbranched, has its lower part garnished with about three leaves, and is terminated by a head of white flowers. The flower resembles that of the Tradescántia virgínica nívea, but is obviously smaller. The plant's "rootstocks form a number of crowns by which it may be propagated, and it will probably ripen seeds in the greenhouse." We have ventured to prescribe the frame as the fitter habitation. (*Bot. Reg.*, Dec. 1833; *Bot. Mag.*, Jan. 1834.)

CCXL. *Orchídeæ.*

CY'CNOCHES *Lindl.* [Not explained, but probably from *kyknos*, a swan, which the flower may be fancied to resemble.] [Bot. cab. 2000
Loddigèsii Lindl. Loddiges's £ ⊠ or 1 my Br.spot Surinam. 1830. D p.moss.potsh.

This plant produces very extraordinary flowers. "Dr. Lindley has given it the above name, and has published it in his excellent work the *Genera and Species of Orchideous Plants.*" Messrs. Loddiges received the plant from Mr. Lance. They "have preserved it in the stove planted in moss and broken bits of pot, and suspended from a rafter; but it has not yet increased." (*Bot. Cab.*, Dec.)

2524. CIRRHÆ'A. [Bot. cab. 1999
Warreàna B. C. *Mr.* Warre's £ ⊠ or ½ ... Y.var Brasil 1831? D p.moss.potsh

Discovered by Mr. Warre, who communicated it to Messrs. Loddiges. "It bears a strong resemblance to the other species. They are all highly interesting and curious plants, well deserving every possible care in cultivation. Like the others, it will admit of occasional increase by separating its offsets." (*Bot. Cab.*, Dec.)

CYRTOCHI'LUM *H. & Kth.* (*Kyrtos*, convex, *cheilos*, a lip; form of the labellum.) 20. 1.
flavéscens *Lindl.* straw-cld.-*flwd.* £ ⊠ or 1 jn Str.spot Mexico 1830. D p.r.w Bot. reg. 1627

The handsome flowers, borne in a raceme, have yellow sepals and petals, and a labellum yellow, spotted with red. "It is interesting not only for its beauty, but also as being the first species of the genus which has yet blossomed in Europe. Its flowers, like those of the other species, turn yellow in drying. Possessed by R. Harrison, Esq., of Aigburgh. It was imported by Mr. Tate. (*Bot. Reg.*, figure in November; text in December.)

CCXLVII. *Asphodèleæ.*

3338. HESPEROSCO'RDUM *Lindl.* (*Hesperos*, the west, *skordon*, garlic; a native of the western world, and allied to the genus *A'llium* or Garlic.) 6. 1. Sp. 2.—
28178*a* lácteum *Lindl.* white-*perianthed.* ☋ △ pr 1½ jl W California 1833. O co Bot. reg. 1639

H. lácteum has "very much the aspect of some white-flowered allium. Mr. Douglas, who found it in California, sent thence bulbs (cormi) of it to the London Horticultural Society, in whose garden it flowered, for the first time in Europe, in July, 1833. It seems to grow freely in any sort of soil, and will probably thrive if left to its fate in the open border all winter." H. lácteum is very like the H. *hyacínthinum*, from which it differs in having smaller flowers; and especially in these being disposed in a less compact umbel, with the stalks (pedicels) rather more than twice as long as the flowers themselves. (*Bot. Reg.* Jan.)

CCLVI. *Aröídeæ.*

331*a* ANTHU'RIUM *Schott & Endlicher.* (*Anthos*, a flower, *oura*, a tail; the floriferous spadix tail-shaped.) 4. 1.

"Messrs. Schott and Endlicher have lately, in a very elaborate memoir, separated (and, we think, rightly) the American plants usually referred to *Pòthos* from that genus, and have given them the new name of Anthùrium. The type of the genus *Pòthos*, in the acceptation of these learned botanists, is the *P.* scándens *Bot. Reg.* 1337." (*Lindley.*)

[Bot. reg. 1635
†2784 grácile *Lindl.* slender-*spadixed* £ ⊠ cu ½ my.jn. G Trinidad, Demerara 1825. Sk s.p
Pòthos grácilis *Rudge*, Hort. Brit., No. 2784.

It has little beauty when in flower; but its spikes of crimson berries give it a pretty appearance when in fruit. It requires a treatment similar to that of epiphytal orchideous plants. (*Bot. Reg.*, Dec.)

Calàdium pinnatífidum. The flowers of certain species of *A*rōídeæ have been found to disengage heat in the course of their flowering; and in Jameson's *Phil. Journ.* for January, 1834, there is a statement of the degrees of heat which Dr. Schultz has observed the flowers of *Calàdium* pinnatífidum, as produced in a hot-house in the Berlin Botanic Garden, to evolve. The flowers of a spadix blossom and decay "in the space of about twelve hours, and are in their greatest perfection between 8 and 10 in the evening." Dr. Schultz did not, previously to 5 o'clock, afternoon, find the flowers of a spadix evince a greater temperature than that of the place in which they were kept: this was 61·2° Fahr. "At about 6 o'clock the flower, which had been previously without any smell, gave out a very powerful odour, and indicated, on trial, 65·1°; at 7 o'clock, 70·2°; at 8 o'clock, 74·7°; at half past 8, 76°; at 9, 78°; at 10 o'clock, 81°; and this last appeared to be the greatest height, since there seemed to be no farther increase up to 11 o'clock. During the increase in temperature evinced by the flowers, the disengagement of the odour likewise increased. This became so powerful that the place was impregnated with an ammoniacal vapour. In the morning the temperature of the flowers had fallen to the temperature of the air," which, it is inferable from the absence of a mention to the contrary, had remained uniform throughout the period named.

ART. V. *Retrospective Criticism.*

CORRECTIONS. — In IX. 672. line 2. for "salicifòlia," read "salicariæfòlia."

Corrections to the Encyclopædia of Gardening, new edition. — The only corrections which we have yet (December 20.) received are the following, by the much esteemed and venerable President of the Horticultural Society, who may be truly called the father of scientific gardening in England. We esteem it an honour to ourselves, and a great advantage to our readers, that our *Encyclopædia* has received corrections from such a quarter: we are sincerely grateful for them, and ardently hope that they will be continued by the same excellent authority as the work proceeds. Mr. Knight's corrections to Part I. are as follows: —

§ 9. and § 46. There is no direct mention whatever, I think, in the older of the Homeric poems [the Iliad] of gardens; but the vine and the fig were then raised, and, I conclude, cultivated in enclosures; for wild animals and birds must have been vastly more numerous in those days than in our own. There are parts in that poem which prove that the author, and probably his countrymen, had not been wholly inattentive to the vegetable kingdom. One of these only I shall now mention. Homer applies the epithet "seed-destroying" to an aquatic tree thrown down by the Scamander. I think there can be no doubt of its being a male poplar or male willow. As malleable iron was wholly unknown at the period when the older Homeric poem was composed, and as it appears to have been well known when the Bible was written (I mean the earlier parts of it), there appears much probability of the Iliad being the older.

§ 12. The common gardener will here suppose our sycamore to be meant, and not the fig mulberry, *F*ìcus *S*ycómorus *L.*

§ 14. The peach tree was not introduced into Egypt till long after the Augustan age. The "Persæa" of Pliny (the tree alluded to in your paragraph) was a totally different species of fruit; and none now exists which corresponds with Pliny's description. The edible part of the fruit described by Pliny appears, I think (I speak from memory only), to be enclosed in a kind of shell; and he speaks of its excessive sweetness, "prædulcis suavitas."

§ 15. Irrigation is, I think, mentioned in the Iliad. A peasant is described conducting a rill of water to irrigate his ground, or garden, which I suppose it to have probably been.

§ 88. I pointed out to Sir Joseph Banks, as he has stated, the lines in

Martial, which he and I conceived to prove that the Romans possessed hot-houses. Martial says, that winter was commanded to bear the fruits of autumn.

" Autumnum sterilis ferre jubetur Hyems,"

are, I think, his words, but I quote from memory only; and fruits could not possibly be ripened in Rome during winter without fire heat; and, as the Romans heated their houses with flues, the advantage of applying those flues to their fruit houses could never have escaped them.

The most important information which you will, I think, be able to give to the modern gardener respects the chemical changes which take place in the sap of trees, and the motions of the sap at different periods of the year. That it descends in our trees through the bark (I exclude the palm tribe generally), from the leaves, cannot be questioned; nor that it ascends through the alburnum into the leaf: but that a portion of the fluid, which has become true sap in the leaves, passes from the bark into the alburnum, and there joins the ascending current, and feeds the young shoots and leaves, is not generally understood by gardeners; nor that the fruit is fed by similar means; nor that the sap is deposited in the alburnum, to afford materials for leaves, or to feed the blossoms and young fruit of the succeeding spring. The coagulum which gives the matter of the new layer of bark in the spring is derived from the same source, though the arrangement of the vessels and fibrous texture of the bark is given by the fluid which descends by the bark. I remain, dear Sir, &c. — *T. A. Knight. Downton, Dec.* 17. 1833.

Analysis of Soils. — In one of Mr. Johnson's communications on horticultural chemistry (V. 404.), directions are laid down for the analysis of soils, with so much clearness and simplicity, that I am hopeful that the day is not far distant when every gardener, who deserves the name, will be able to analyse soils for himself, and scrutinise every improvement in their management with the discriminating eye of a philosopher. There is, however, a slip of the pen, or of the types, in the description of the process; which, though it cannot cause inconvenience to those skilled in chemistry, may prove to the tyro a considerable impediment. In soils where iron is present, it may, as the author of the paper directs, be separated from the other ingredients by dissolution in muriatic acid. Into this solution we are directed to drop gradually " a solution of prussiate of iron." Instead of the latter substance, prussiate of potass is, I apprehend, meant. The prussiate or hydrocyanate of iron is the precipitated, not the precipitating, salt. Having followed with complete success the plain rules laid down in this paper for the analysis of soils, I recommend them to those of my professional brethren who may be disposed to enter on such investigations. — *Ephebicus Horticultor. Nov.* 1. 1833.

Fountains for the London Squares. (IX. 539.) — No one launches out ever so little in print, but he finds the small fry of the Aristarchus tribe ready at their post to give their veto, or their fiat, to whatever even the humblest may assay. My London-square fountains have come in for their share; and, among the sapient remarks directed against their adoption, none, I think you will say, are more amusing than the objection made against them from the ducking His Majesty's liege subjects must inevitably get, if they walk on the weather side of one of my 60 ft. jets in a windy day. If a man were to build a villa proximate to the Falls of Niagara, one might truly say, that, under the favour of a brisk wind, he might find himself rather oftener than he liked in a Scotch mist; but to suppose that any thing short of a hurricane would throw a jet of water 60 ft. in height, and of proportionate diameter, more than its own elevation in a lateral direction, looks very like the suggestion of one of the wise men of Gotham; and, if blowing a hurricane, why need the jet play at all? The same art that bids it rise triumphant into air can bid it sleep; and therefore, as far as that goes, I must think, " cadunt quæstio et argumentum" [the question and argument both fall]. — *William Mason, jun. Necton, Norfolk, Nov.* 1833.

Mr Ballard's Treatise on the Nature of Trees, and the Pruning of Timber

Trees, reviewed in Vol. IX. p. 687. — Sir, J. M., in his review of this work, states that the author is "chargeable with misrepresentation, for asserting that the *sole* object of the forest pruner is to obtain bulk of stem." He then states that "length of stem and clearness from knots, whether dead or alive, constitute the strength and value of timber;" and infers that these qualities cannot be obtained without the aid of the pruner. Now, in no part of the *Treatise* is it asserted that the pruner's *sole* object is to obtain bulk of stem; and in chap. iv. is the following sentence:—" The pruning of timber trees may be said to have for its object, first, to advance the growth and bulk of trees; secondly, to improve their form; and, thirdly, to improve the quality of the timber." Each of these objects is treated of in a separate chapter. I leave you, therefore, to decide whether it is I or J. M. that has been guilty of misrepresentation.

J. M. states that " it is well known that the oak sheds its sprays, and the larch many of its lower branches." This wonderful and admirable provision of nature *may* be well known, but I have never seen any account of it, except in my own *Treatise.* J. M. considers the natural shedding of sprays an argument in favour of pruning; I would ask him if, because trees shed their leaves, he would consider this an argument in favour of taking their leaves off? Leaves are not shed until they have performed the functions for which they were designed; neither are sprays shed so long as there is sufficient space for their growth: nothing is lost through having the parts shed prematurely; for, in the works of nature, when the intended effect is produced, the cause is withdrawn. Yet some men will rely on their own judgment, in preference to the unerring rules of nature.

I cannot agree with J. M. in his notion, that the oak, beech, &c., if permitted to stand alone without the aid of pruning, would only form vast bushes, wholly worthless to the builder. A very little observation of the nature and growth of trees will lead to a different opinion.

As J. M. states that length of stem and clearness from knots constitute the value of timber, perhaps the following extracts from my *Treatise* may give a hint how timber possessing these qualities may be procured:—" Some imagine that whenever a stem is free from branches it is owing to pruning, or to the browsing of cattle; but this is not the case, it is natural to a timber tree, be its situation what it may, to have a certain portion of its stem clear of branches. . . .There are no pruners in the uncultivated forests, whence we have the long pines and deals imported, with often 30 ft. or 40 ft. clear stem before the branches begin. These trees have grown without the assistance of the pruner; and they have shed boughs that were far above the reach of cattle. These forests clearly prove that trees have the power of shedding such sprays as are useless or unnecessary; for a tree could not reach the height of 30 ft. or 40 ft. without a great number of branches. It must have branches when but 1 ft. or 2 ft. high; the number and size of these branches must increase, as the tree increases in height; and a tree 30 ft. in height must have a great number of branches; yet we have the stems of trees 30 ft. high without a single branch. How do the advocates for pruning reconcile this to their philosophy? Will they assert that the stem is stretched, or protruded; so that the boughs, first situated near the ground, are, by the growth and lengthening of the stem, lifted up farther from the earth? This they cannot say; yet they will have great reluctance in admitting the existence of this natural shedding of sprays; for no person who well understands the subject will ever prune under the idea of improving the shape or increasing the quantity of timber. . . .It is impossible that a tree can be thrifty with a long stem, without lower boughs, in an open and exposed situation. It is equally impossible that a tree can, when closely surrounded by others, as it would be in a grove, have large and long spreading lower boughs, and a short strong stem. If we want long-stemmed timber, we must have it from the grove or wood; if short and large, we shall find it in the detached and exposed tree. The pruner never can, with all his imaginary skill, procure, from the detached and exposed tree, timber long-stemmed and free from knots, as from a grove; neither can he from the thickly planted grove obtain short and strong stems. In spite of all his endeavours, trees will persist in trying to suit their shapes to their situations. There would be some little more reason in the attempts of men to direct the growth of trees, were they by any means to present obstacles to prevent the growth of such parts as they wished not to grow; and to leave only such parts open and at liberty as they wished to grow. What should we think of him who, wishing to divert a river at any point, attempted to do so by lading out the water as fast as it ran, instead of presenting an obstacle to the progress of the stream, where he wished to stop it? Verily, we should think it was the work of a madman.... It should be considered, that the form of a tree is not the effect of accident or chance, but the result of principles incessantly acting, and given for securing the most advantageous shape for the peculiarities of situation. As trees have not the power of locomotion, there is a necessity for their possessing the power of varying their forms according to their situations. It is the nature of a tree to take that shape which is best calculated for effecting the greatest quantity of growth capable of being produced in the situation it may chance to be in." ... I am much gratified by J. M.'s complimentary observations; and I only wish he had read the *Treatise* more attentively. I am, Sir, yours, &c.—*Stephen Ballard. Ledbury, Dec.* 13. 1833.

Mr. Munro's Mode of training the Oak for the Production of kneed, or curved, Timber for Naval Purposes. (IX. 557. 714.)— Sir, In answer to the first objection of a "Journeyman Gardener" (IX. 714.) to my mode of training the oak for naval timber (IX. 557.), I need only state that nothing is more easy than to prevent the upper part of the trunk decaying down to the first knee: the top has only to be rounded off like the head of a walking-cane, and a few of the buds allowed to remain on close by the cicatrix, until the bark shall have closed over the amputation. Should these shoots dare to make a pull for the advantage, let them be kept down till the curved shoots are able to fight their own battle.

The second objection is, that trees or shoots, when supported by posts or otherwise, become too weak to support themselves when the said props are removed. Mercy on us, Sir! only think on this: a "Journeyman" is surely thinking of tall marrowfat peas, and not of trees. Does he imagine all the world wrong, and himself only right? Such an idea is common to many, no doubt; but let us consider what is the use of a post to a tree. Is it not to support it until it shall gather strength to support itself? Why are one-year-old grafts, or one-year buds supported in a nursery? Is it not with the view of strengthening them, rather than to render them feeble? However, a "Journeyman" thinks differently, and, consequently, is of opinion that the action of the wind would cause sad twisting and creaking among the knees and curves: but even supposing his notions to be correct, in a forest consisting of 50, or 100, or 1000 trees, it would only be a few of the outside trees that would suffer, while affording shelter to the rest. Now, Sir, in my opinion, this said "Journeyman" either forgets, or does not understand, the nature of the tree upon which he writes. Is there on earth's wide green surface, among all the varied tribes of trees, one which stands more firmly than the oak amidst the angry howl of stormy Boreas's blast, or one that with equal bravery and native strength of stem stretches out his bare and rugged arms unscathed amid the tempest's rage? This property is not acquired by age, but is innate and observable in an oak tree of any age.

The third objection made by a "Journeyman" is a misrepresentation. He says, I should find difficulty in supplying my six or eight shoots with an equalised quantity of nourishment. This is, by the way, a specimen of his attentive perusal of my paper. Pray, is any mention made therein of six or eight shoots? Can he not see that from four shoots, trained as I direct, eight knees can be obtained? "Tell it not in the 'Carse of Gowrie,' publish it not in the streets of 'Inchture!'" Is it possible for any one to be so ignorant of the art of cutting up of wood as not to see the mode in which this may be done? For example, cut one of the branches through at five ft. from the stem, and the part taken off will form a knee or curve; and when the trunk is split up the middle, the half of the trunk, and the remaining half of the branch, will form another knee: thus, from four branches trained at right angles, and situated alternately on the trunk, each extending, say 10 ft. from it, eight knees or curves can be obtained; and this, I think, without much confusion. "A Journeyman" cannot, however, comprehend this; and it is a great chance if he does so yet. Oh, no! he can see nothing but a mass of confusion, caused by his own six or eight shoots. He tells me that the two uppermost branches would have a strong pull for the advantage; and why so? The pear tree is an upright-growing tree, yet we do not find that there is any great inequality among the branches of a well-trained pear tree, neither are the uppermost branches strongest, but quite the reverse.

The fourth objection is, that twigs, bent when young, will not keep their form; as trees and branches, when bent downwards from their natural position, have a strong tendency to rise upwards. I may here remark that no candid reader will, I think, say that I recommend bending branches below their natural position. After this need I go on farther? Really, Sir, the whole of the objections amount to nothing, and may be refuted in a few words.

In every lawn in which there are old oak trees, instances occur of individual branches extending horizontally, to a far greater distance than I recommend, or than is necessary; and it was this fact that led me to think, that, by aiding nature a little, the number of such branches might be increased, and the form of the curves secured. Surely, there is nothing unnatural in this; particularly with a species of tree so much inclined to shoot forth its branches in a horizontal direction as the oak; although, after what a "Journeyman" has said, I do feel a little surprised that the wind allows any such habit. With regard to what I intend for curves becoming only slight bends, the thing is impossible; for whenever the curve is formed, and the shoot takes its upright position, the weight which the top will acquire, from year to year, will increase rather than diminish the bend. In relation to the very odd, original, and entertaining method proposed by a "Journeyman Gardener," for producing timber for future navies, I should like to know what extent of surface of plantation would be required, containing *trees of stronger growth*, to be employed as blinders; and how many miles of this outside row of crooked progeny would be wanted to build a 74-gun ship? It does not follow that seeds of a crooked variety should produce a crooked progeny. It is not so with the seeds of weeping ash; the same condition holds good among the animal and human tribes. This reply shall be the last, as it is the first, I have ever made to an anonymous attack. I am, Sir, yours, &c. — *James Munro. Brechin Nursery, Dec.* 12. 1833.

Mr. Whiddon's Mode of cultivating Onions and Asparagus. — Sir, As Mr. Mitchell, in his answer (IX. 626.) to my remarks (IX. 323.), quotes Dr. Lindley's *Outlines of the Principles of Horticulture*, I wish to refer him to Dr. Lindley's *Principles of Botany*. In the latter work he will find passages which, in my opinion, do not at all coincide with some in the former work. Mr. Mitchell requires from me a philosophical reason for my mode of cultivating plants. In compliance with his request, I will state, as far as I am able, the principles on which I act. I have always been taught that soils afford a fixed abode to plants, and are also the medium of the principal, if not the whole, of their sources of nourishment; that the earths of soils, exclusive of the organic matter which they contain, are of no other use than enabling the plant to fix itself; that the fluid matters of the soil are absorbed by the fibres of the roots, and carried up through the alburnum to the leaves, which are the lungs of plants, and which exhale a part of the water of the sap propelled to them, decomposing the remainder, and retaining carbonic acid gas, &c. For the purpose of decomposition, they inhale atmospheric air, absorb carbonic acid gas in the night-time, and give out oxygen during sunshine. These appear to me to be the opinions of the latest writers on the subject of vegetable physiology. Does it appear by them that the roots absorb atmospheric air from the soil? They do not. (See *Phil. Mag.*, vol. xx. p. 307.) Mr. Mitchell also says that my mode of culture will exclude moisture from the roots; but he must be aware that that excellent practical gardener, M'Phail, recommends treading melon beds, to retain moisture. (*Encyc. of Gard.* § 3273.) I have followed his recommendation, and have, in consequence, had crops superior to those of my neighbours. I am confident that better crops than mine were not grown even at Slapton. Mr. Mitchell seems to have a great respect for cooks who delight in "sound rating and onion-throwing;" but I think most of what will please my employer. — *William Whiddon. Frost's Nursery, Leamington, Warwickshire, Dec.* 29. 1833.

In transplanting a Tree, we should place its Sides or Phases opposite those Points of the Compass which they faced before Transplantation. (IX. 580.) — C. M. W. but reiterates the practice described by Virgil in his *Georgics*, book ii. ver. 265. to 272. — *Ephebicus Horticultor. Nov.* 1. 1833.

Mr. James Hart's Notes on the Mode of cultivating Early Potatoes, which is practised in the Neighbourhood of Dublin. (IX. 589.) — Sir, Mr. Hart begins by asserting that "persons have whole acres of potatoes rotting about Dublin every spring." This is not true; and I challenge him to name instances of such wholesale failures. "The cause is assigned to every thing but the right thing." Why, surely it will be conceded to us of the sister isle (confessedly low as we are in rural improvement) to understand the cultivation of the potato at least. "The Irishman's mode of planting the potato is to cover the seed potatoes with dung in the drills to keep them warm, and to spread out the cut seeds, or sets, in the barn, to keep them from rotting: both acts have just the opposite effect with early potatoes." I deny that either of these acts is injurious to early potatoes. If the potatoes have not been damaged, and if the sets are properly cut; that is, so as to have one or more eyes to each, it matters not whether they lie thinly on the floor, or are thrown up in a heap; but the former practice I always prefer. If Mr. James Hart had only asked a few questions of his neighbours in Mud Island, any of the old women there could have informed him that early potatoes are never planted in drills in the neighbourhood of Dublin, but in beds from four to five feet wide (called ridges in Ireland), which have deep alleys or furrows between them, and are, in appearance, exactly like the asparagus beds in the market grounds about London; and that it is only the general crops, on a more extensive scale, that are grown in drills. It is unnecessary for me to make any remarks on Mr. Hart's reasons for planting his potatoes "over the dung," and his would-be-learned lucubrations on the benefit of the atmospheric air. These need only be read to be rightly appreciated. We are informed that "air, heat, and water" (he has forgotten light) "are the causes of vegetation, and air the mainspring." Mr. Hart is also entirely mistaken when he says there is no advantage in "planting potatoes earlier than the middle of March." Let him visit Rush, Skerries, Malahide, &c., or any place in that portion of the county of Dublin called Fingal, and he will learn how and when early potatoes are obtained for the Dublin market. I can assure him that at present he is a mere novice in the art of growing early potatoes. I shall take my leave of Mr. Hart for the present; but strongly recommend him, before he commits himself again on this subject, to take a few lessons of his near neighbours the Mud Islanders, who are perfectly competent to instruct him in this branch of his profession. I must observe that Mr. Hart's conclusion is in perfect keeping with his essay. He says: — "If all this be observed," meaning the information he has imparted, "the early potato will be plentiful enough about Dublin next summer." In the name of common sense, what does he mean? I am, Sir, yours, &c. — *Martin Rowan. Fulham Nursery, Dec.* 19. 1833.

Conditions under which Crops of Turnip Plants were, and were not, ravaged by the Beetle. (IX. 505. 631.) — Sir, I sowed seeds of the white Norfolk turnip upon a piece of ground previously manured with good moist horse dung, and trod in the seed well, immediately after sowing; I also sowed at the same time some of the same seed upon another piece of ground a few yards distant, without either manuring or treading: the results were, in the former case, every plant escaped the beetle's ravages; in the latter, three fourths of the plants were eaten off by the beetles. A friend sowed, in the usual way, seeds of turnip upon a piece of garden ground, and the plants were eaten off; he sowed a second and third time, with the same result; he then well manured the ground, sowed again, and the whole escaped. Another gentleman, a farmer, sowed part of a large field immediately after ploughing it, indeed following the plough; the remainder a few hours afterwards: the sun being bright all day. On the former the young plants all escaped, and on the latter the greater part of them were eaten off. This case was not one made by way of experiment, but was quite an accidental circumstance; a neighbour, however, noticing it, asked the proprietor the reason, but he was unable to explain it, or to state more than the facts already named. The gentleman who asked the reason had himself tried liming the ground after sowing it, and sooting it in the same way; also sowing radish seed with the turnip seed, as severally recommended in different parts of your Magazine, but without the desired effect: in the latter case, particularly, he found that, after the beetles had eaten the radish plant, they attacked the turnips.

I am of opinion that the only practicable and effectual preventive of the beetle's ravaging the crops of turnips is to sow the seed when the ground is fresh and moist, and to roll it well, in order to preserve the moisture, manuring also with moist dung if possible; as it is observable, in the first case I have mentioned, that the moist manure and treading preserved the crop; in the second case, the moist manure alone; and in the third case, the fresh, and consequently moist, mould. I think also my opinion is farther confirmed by the fact, that a wet summer produces, generally, an abundant turnip crop, and a dry one the reverse. It would also appear that a moist day should be preferred for sowing turnip seeds, and if the weather should be so dry that sowing with moisture could not be farther adopted than by sowing immediately after the mould is turned and is consequently fresh, would not the application of the water cart have the desired effect? [In *Encyc. of Agr.* § 2692. 2d edit., will be found a figure and description of a machine for sowing turnips and watering them at the same time.] I may observe, that my opinion is founded upon a different principle to that suggested in IX. 505.; and I would request the reader to remark that I do not say the plan I recommend will have the effect of destroying the beetles, but of preserving the crop. Rusticus of Godalming, as it appears by the extract in IX. 631., thinks that the eggs of the beetle are on the seed; but, if that be the case generally, I would ask, why, in the cases given above (the same seed being used for both plans in each case), were the plants not equally affected? I do not ask this in the spirit of contradiction, but to stimulate your readers to farther examination on this very important subject. — *Myles Priest. Reading Nursery, Dec.* 12. 1833.

In addition to our quotation, in IX. 631., from Rusticus, we shall here give another of his remarks: —"I had always observed that there was the greatest quantity of grubs on very young plants, and that they were very various in size, and that it was not till the plants were a fortnight or three weeks old that the beetles appeared in any quantities; yet there were some beetles from the very first coming up of the plant." A writer in *The British Farmer's Magazine*, for November 1833, p. 426., reviews Rusticus's discovery, and applauds its great probable value, should it be proved to be true; but objects to Rusticus's asserting that the young plants of turnips are more extensively ravaged by the grubs of the beetle than they are by the beetle itself, and contends that it is by the beetle itself that the injury and destruction are achieved. It may be well to remark here, that the grub of a beetle and the perfect beetle are in some species very similar: we know not whether they be so or not in the turnip beetle. The remainder of the reviewer's objections are included in these words. "Turnip-seed, committed to properly prepared ground, makes its appearance on the fourth day. Now, suppose that the eggs of the insects are attached to the seed, as is represented by Rusticus, is it probable that they can be transformed first into grubs, next into chrysalides, and lastly into perfect beetles, in the short space of five, or six, or even fourteen days? This is for Rusticus to explain; and it is to be hoped that his description only is erroneous, not his doctrine." The same writer offers some strictures on Rusticus's act of steeping in brine the seeds of turnip; but these, as he has misunderstood Rusticus, we need not notice. We have accurately given, in IX. 632., the experience of Rusticus, in his own words, on this point. — *J. D.*

ART. VI. *Queries and Answers.*

WHAT are the Heat and Moisture best adapted for the Production of the various Fruits? — Since too much dryness is certainly injurious, and too much moisture is generally believed to be so, what is the best medium of moisture for the flowering of the various descriptions of fruit trees? The horticulturist can, in a great measure, command temperature; and he knows, in regard to it, what to aim at: but moisture has been less attended to, at least as regards its quantity in measurable terms. The indications of the hygrometer ought to be attended to with as much care as those of the thermometer. Ought there not to be a series of experiments commenced, in order to determine the quantity of both heat and moisture best adapted for the production of the various fruits? — *R. Turnham Green, Nov.* 5. 1833.

Plants, the Leaves of which will strike root. — I should like to see, in your Magazine, a list of those plants the leaves of which will strike root, and form plants; such as Bryophýllum calycìnum, *Kalanchòe* crenàta, Gloxínia, *A'*loe, &c. — *T. Rutger. Shortgrove, December,* 1833.

An Essay on variegated Plants, pointing out how Variegations are produced, and their Uses, if any, in ornamental Scenery, with Lists of the most beautiful variegated Trees, Shrubs, and Plants, is desired by Mr. Rutger, and also by T. G. and J. W.

Self-acting Gate. — Might not a machine be contrived by which any interior gate of the approach (where it is necessary to have interior gates) could be opened on the passage of a carriage wheel over a certain part of it fixed on the road; the weight being made to act on some concealed portion of the machinery, by which the gate would be opened, and remain open sufficiently long for a carriage, &c., to pass, and then shut of itself? — *T. A. B. Easthwaite Lodge, Lancashire, Dec.* 24. 1833.

Parker's sympathetic gate (*fig.* 8.) is of this description. On the approach of a carriage, the gate opens, apparently by its own volition, and closes again, after the carriage has passed through, without any apparent cause. The effect is produced by small plates let into the ground at short distances from the gate, which, when the carriage wheels roll over them, descend like a weighing machine, and act upon certain levers concealed in a trunk under the ground. By means of these levers, a toothed wheel is made to revolve, and to turn a toothed pinion affixed to the swinging post or axle of the gate, and thus to throw it open, or to close it. (*Encyclopædia of Agriculture*, 2d edit., § 3107.)

In the *Encyclopædia of Cottage, Farm, and Villa Architecture* will be found figured and described (§ 831.) a most valuable description of gate, for the lodges to the approach roads of country residences, which we would most earnestly recommend to the attention of master gardeners, land stewards, and country architects and builders. This gate (*fig.* 9.) is the invention of Mr. Saul of Lancaster, and the object of it is to enable the gate-keeper to open the gate in the night time, from his bed-room, without the trouble of dressing, or going down stairs. So benevolent a design ought to be seconded by every gardener. In *fig.* 9. *g* represents a horizontal shaft placed in a tunnel

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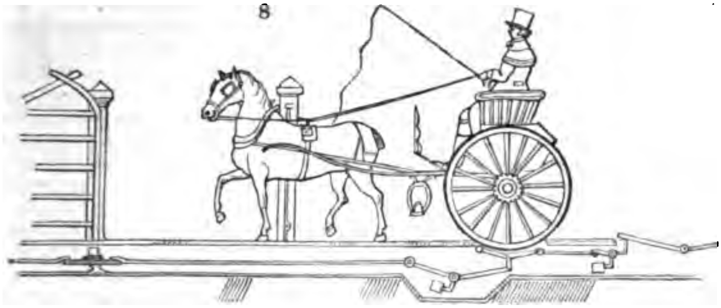

made across the road directly under the gate, working at one end on the heel of the hanging post by a pinion at *h*, and at the other by a bevelled pinion at *i*, on the upright shaft *k*. This shaft has a pinion which works into another at *l*, on the axle of which is the winch *m*, which is supposed to be at the bedside of the gatekeeper. (*Encyc. of Cottage Architecture*, § 831. See also VIII. 163.)

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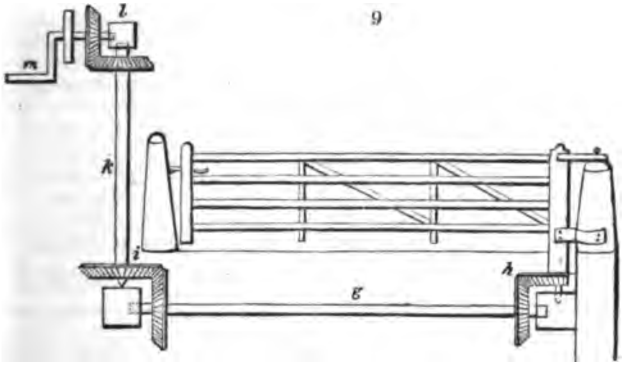

Spontaneous Vegetation of Broom in a Wood after a Fire.—Sir, The following facts I can vouch for; perhaps they may excite enquiries not altogether unprofitable. About seven years ago, the branches broken off by the wind, in one of my plantations, being carried off, the twigs were gathered and burned. In a year or two, but where the ground was burned, and amidst the charred remains of the fire, some plants of the common broom (*Spártium scopàrium L.*, *Cýtisus scopàrius Lk.*) appeared, and grew vigorously. This seemed odd to me, and I showed them to some of my family; but the same burnings, and the same growth of the same sort of plants, have since been twice repeated. This I cannot account for by even the vaguest guessing. I am sure there were no broom plants among the small branches burned; and, if there were, the seed must have been consumed: in fact, we have only a very few plants of broom on the grounds. Then whence came the seed? For I do not believe in vegetable creations in our times, though Ray seems to countenance something of that kind by his "seminal tinctures" in the earth; and, even if the earth preserved the function to originate without parentage, fire does not seem to be the engine to effect such an operation. The fire weed in America, and other particulars of the same kind, will, of course, suggest themselves to you.—*George Ensor. Ardress, Dec.* 20. 1833.

Grottoes at Painshill and Ascot Park.—You would confer an obligation upon myself and others of your distant subscribers, by giving detailed descriptions accompanied by plans, of the so much admired grottoes at Ascot Park and Painshill; the latter of which (V. 569.) you say that you consider the finest in Europe. — *T. A. B. Esthwaite Lodge, Lancashire, Dec.* 24. 1833.

Plans of these grottoes, to be of any use, must be so large as not to suit our work; indeed, it is hardly possible to convey useful practical ideas of grottoes, cascades, and similar rustic-work, by plans or sketches of any kind. We recommend all who wish to form any such structures to visit, in company with an ingenious stone-mason, who should be employed to execute them, the best models, however distant they may be. Painshill will repay a journey from any part of the island. — *Cond.*

Splitting the Roots of felled Trees with Gunpowder. — Sir, I observe this process going on in Kensington Gardens. Can you or any of your readers inform me if this is done on a principle of economy; or, if not, on what other principle it is preferred to the common mode of splitting roots with wedges? — *J. B. Kensington, January,* 1834.

Arranging the Colours of Florists' Flowers. — Sir, Your recent remarks on taste, as it regards the variety of colours produced in the grouping of flowers, has induced me to look back to II. 309. of your Magazine. I have long been inclined to the ideas there expressed, though I have never been able to carry them into full effect for want of materials. Being now, however, more fortunate in hyacinths, tulips, ranunculuses, &c., and particularly in chrysanthemums (of which I have nearly a perfect collection and a great number of plants), I intend to try the effect upon a large scale. But a knowledge of colours and tints is necessary; for, although we may take the seven primary colours as a guide, yet the difficulty is to know where *whites, blacks* (which in hyacinths and ranunculuses we nearly have), *browns,* &c., should be placed. An elucidation, therefore, of what you aptly term " a natural system of colours" and tints (and, if accompanied by coloured figures, so much the better) would be of great use to many who, like myself, have neither milliners nor artists at hand to apply to. I therefore beg, as a favour, your assistance in this matter, and should be particularly glad to see the information in your February Number; as, early in March, chrysanthemums should be parted and planted.

If you would fill up the sketch in the last paragraph at II. 312., it would doubtless go far towards realising, at least in the rising generation, your ideas, which seem founded on truth and nature.

The colours of chrysanthemums are usually called pink, blush, white, buff, yellow, orange, brown, salmon, red, crimson, lilac, and purple (?). Yours, &c.— *Solus. Bagshot Heath, Dec.* 10. 1833.

With regard to the difficulty of disposing of whites, blacks, and browns, in the arrangement of flowers, it may be adopted, as a rule sufficient for most practical purposes, that whites look well beside every other colour, even blacks and browns; that blacks look best next to greens, reds, and whites; and that the same will hold good as to browns. In arranging hyacinths in a bed, or chrysanthemums on a stage, all the varieties having the same colour for a ground should be placed together; for example, all the reds: but, to prevent the monotony that would result from salmon running into crimson, and crimson into lilac, there may be introduced between them streaks of white, and sometimes of black or brown, to keep up the harmony. It must be recollected that, in arranging flowers according to their colours, something of botanical arrangement must also be kept in view. That is, all those varieties which approach the nearest to each other must be placed the closest together. This may frequently be done, and harmony preserved, without the introduction of either whites or blacks; but, where it cannot, whites or blacks will afford the desired contrast. It is difficult, if not impossible, to give detailed directions on this subject without the aid of coloured plates; and, even in that case, much must be left to the taste and feeling of the operator. We would recommend our correspondent to store his mind with ideas on the subject from the works of Burnet, and of Phillips, on Painting; or, if these works be too bulky for his purpose, we would recommend a small work, by a scientific house-painter, Mr. Hay of Edinburgh, entitled *The Laws of Harmonious Colouring, &c., by D. R. Hay.* If our correspondent possesses our *Encyclopædia of Cottage, Farm, and Villa Architecture*, or even Part XII. of that work, he will there find (§ 2013.) how highly we think of Mr. Hay's Essay; and he will be able to conceive in what way it will be useful to him in the arrangement of his flowers.—*Cond.*

Jasiòne perénnis, Houstònia cærùlea, Gentiàna *vérna, and other Species.*— I should feel greatly obliged, if Mr. Penny, or any other of your numerous correspondents, who have been in the habit of growing these plants, would inform me of the best mode of cultivating them; both in pots and in the free ground; the best soil and situation for them, and any other particulars respecting their culture, that may have come under their notice or observation. I have frequently bought these plants of the London nurserymen, but in every instance they have very soon dwindled away and died. I have been told that a portion of coal-ashes is beneficial to the growth of *J*asiône perénnis: is this correct? An early answer to these questions will oblige a constant subscriber to both of your Magazines since their commencement, and an ardent lover of the beauties of Flora.—*R. T. Jan.* 1. 1834.

Tree Mignonette.— In IX. 232. Mr. Elles states that the common mignonette may be grown to any height required, or at least to any reasonable height. He says, "We have it here from 4 to 10 ft. high." He furthermore goes on to state that he has one plant about 8 ft. in circumference at the base, &c. Now, I should feel greatly obliged to Mr. Elles, if he would take an early opportunity of informing me, as well as some others of the readers of this Magazine, of the method he pursues to obtain plants of *R*esèda odoràta frutéscens, so decidedly superior to any plants of the kind that I have ever seen or heard of before. The plants I have grown have not averaged more than 3 ft. or 3½ ft.—*Id.* [See Elliot's mode of culture, IX. 702.]

Tree Mignonette.— Mr. Elles of Armagh writes (IX. 232.) that he had a plant of mignonette 10 ft. high and 8 ft. in circumference at its base. I should be glad to learn Mr. Elles's mode of rearing the little darling to such perfection. Assuredly he has nursed the pygmy reseda into O'Mignon, the celebrated Irish giant.— *T. A. B. Easthwaite Lodge, Lancashire, Dec.* 24. 1833.

Grafting and Budding of Roses.— I am informed, upon respectable authority, that roses will not succeed by grafting them in the common way, but will take freely by *rind*-grafting. The scallop or French mode of budding has also been found to succeed well in spring.—*R. T. Jan.* 1. 1834.

[The writer next makes some requests, and states some things as facts, which he ought to be aware can only receive attention from an Editor when accompanied by the writer's name and address. In the mean time, he may refer to the new edition of our *Encyc. of Gard.*, now publishing.]

Gordònia pubéscens and Lasiánthus, Malachodéndron ovàtum, and Bignònia capreolàta.—The most suitable culture for these plants is desired, as it regards soil, situation, propagation, &c. I have frequently bought the first three species mentioned, and as often lost them. Is peat soil indispensably necessary for their cultivation, or are they more tender than other common hardy shrubs, so that they require some kind of protection in winter? As far as Bignònia capreolàta is concerned, I have no trouble in keeping or growing it; but, although I have had three plants for these ten years, I have never succeeded in flowering them. One Bignònia has been constantly kept in the stove in a pot, one in the green-house in a pot, and one planted outside of the green-house, and brought inside, and trained up the rafters; yet, with all this, I have never once flowered it during the whole of the above period.—*Id.*

Chrysánthemum sinénse and índicum.—I possess 40 varieties of these delightful autumnal flowers, 38 of which I never fail to blow every year; but although I have had the yellow warratah, and the yellow Indian chrysanthemum, for some years, I have never once induced either of these to flower under any mode of treatment that I have pursued. Any information on this point would be desirable. — *R. T. Jan.* 1. 1834.

Bérberis *vulgàris aspérma.* — Is there any such thing as the true stoneless berberry? I perceive it is in the Horticultural Fruit Catalogue. I have received plants for it from various sources, but they have always proved, when grown in my garden, nothing but the common wild berberry. Is it only an accidental variety, that is apt to run back to its original state in particular soils and situations? — *Id.*

T*áxus baccàta.* — Is it necessary for the berries of the common yew tree to lie and rot one year before sowing, in the same manner as haws? — *Id.*

Lemon Seeds. — Can any of your correspondents inform me, if the seeds or pips of a lemon be extracted from the pulp, and thoroughly cleansed, whether in this state they will retain their vegetative properties for two years; and, if they are found to do so, whether the seeds are not best kept in white sand till it is convenient to sow them? — *Id.*

On the best Mode of packing Peaches, Grapes, and Strawberries, to send to a Distance. — In answer to "A Constant Reader's" query on this subject (IX. 723.), I beg to offer the following account of the modes I usually practise: —

For peaches my plan is this: I procure a box of a size proportionate to the quantity of fruit that I wish to send, some tow, and some silver paper. I cut the paper into small squares, and place one square smoothly round each peach; after this, I put a small quantity of tow carefully and evenly around the paper. Into the bottom of the box I put a thin layer of dried moss, on which I put the fruit as closely together as possible, and in the following manner: I pack two layers without anything more between them than the paper and tow which surround them; I then carefully support a thin board by three nails from the outside, so that the board may not press too much on the fruit below; this board forms a second floor, on which I pack two layers more; and so on. If melons are required, they may be closely packed in the lower chamber, or in the top part, if any vacant space remain; but care should be taken to fill up any vacancy well with tow.

Grapes I pack as follows: Into the bottom of a box I put a shallow layer of clean bran; I then place in closely a layer of bunches of grapes that are perfectly dry, and from which all the decayed berries have been carefully removed; I then strew in as much bran as will cover them, and so on till the box is filled; taking care to shake the box gently as I proceed, that the bran may fill up every crevice, and prevent the bunches from being displaced during their journey. The person who unpacks the fruit may easily clean away the bran, by blowing smartly through the bunches with a small pair of bellows.

For packing strawberries, I provide a quantity of small upright wicker baskets made to hold from a pint to a quart each; I fill them by putting the fruit in very closely together as I gather it; I then tie the baskets down carefully, and closely pack them in an upright position in a large flat basket made for the purpose. Strawberries, thus packed, will be quite fit to go to the table after one day's journey; and it is advisable never to attempt to send this fruit to a distance which will require it to be two days on the road.

I have practised the above modes for several years, and I shall continue to adhere to them until I am fully convinced that I can adopt better ones. I am, Sir, yours, &c. — *Thomas Wilson, Gardener to the Rt. Hon. the Earl De la Warr. Buckhurst Park, Sussex, Dec.* 21. 1833.

Art. VII. *Covent Garden Market.*

The Capacity of the Measures used in Covent Garden Market. — To the information given on this subject by Mr. Bevan (IX. 380.), that gentleman has since added the following: —

There are four sizes of punnets, which leaves the capacity of this measure very uncertain, unless the particular variety is indicated. From Mr. Bevan's experiments the greatest capacity of the

	Cubic inches.		Cubic inches.
Sieve is - - -	1644	Largest punnet - -	248
Half sieve - -	822	Second punnet - -	228
Quarter sieve - -	362	Third punnet - -	90
		Least punnet - -	60

But as, in practice, they may not be filled to the maximum, it may be inferred that, relatively to a bushel, the proportion will stand as follows: —

2 Sieves - -	1 bushel.	12 Large punnets -	1 bushel.
4 Half sieves -	1 bushel.	16 Second punnets	1 bushel.
8 Quarter sieves -	1 bushel.	32 Third punnets -	1 bushel.
		48 Least punnets -	1 bushel.

In other words, they may be considered as follows: —

Sieve equal to -	½ bushel.	Large punnet -	5¼ pints.
Half a sieve - -	1 peck.	Second punnet -	1 pottle.
Quarter sieve -	1 gallon.	Third punnet -	1 quart.
		Least punnet -	1½ pint.

~~(London and Edinburgh Phil. Mag., third series, vol. ii. p. 406. and~~ p. ~~482~~.)

	From			To		
The Cabbage Tribe.	£	s.	d.	£	s.	d.
Cabbage, per dozen:						
Red - - -	0	2	0	0	3	0
Plants or Coleworts -	0	2	6	0	3	0
Savoys - - - -	0	1	0	0	0	0
Brussels Sprouts, per ½ sieve	0	1	6	0	2	0
German Greens, per dozen	0	0	9	0	1	0
Broccoli, per bunch:						
White - - -	0	1	6	0	2	0
Purple - - -	0	1	0	0	1	6
Tubers and Roots.						
Potatoes - per ton	4	0	0	5	0	0
Potatoes - per cwt.	0	4	0	0	5	6
Potatoes - per bushel	0	2	3	0	3	0
Kidney - - -	0	2	6	0	3	0
Scotch - - -	0	2	3	0	2	9
Jerusalem Artichokes, per half sieve - - -	0	1	0	0	1	6
Turnips, White, per bunch	0	0	2	0	0	3
Carrots, per bunch - -	0	0	4	0	0	6
Horn - - -	0	0	6	0	0	8
Parsneps, per dozen - -	0	0	9	0	1	3
Red Beet, per dozen -	0	1	0	0	1	6
Skirret, per bunch - -	0	0	9	0	1	3
Scorzonera, per bundle -	0	1	0	0	1	6
Salsify, per bunch - -	0	1	0	0	1	6
Horseradish, per bundle -	0	2	0	0	5	0
Radishes:						
Red, per dozen hands (24 to 30 each) - - -	0	1	0	0	1	6
White Turnip, per bunch	0	0	3	0	0	0
The Spinach Tribe.						
Spinach per sieve -	0	2	0	0	2	6
Spinach per half sieve -	0	1	0	0	1	6
Sorrel, per half sieve - -	0	1	6	0	2	0
The Onion Tribe.						
Onions:						
Old, per bushel - -	0	3	6	0	4	0
For pickling, per half sieve	0	2	6	0	5	0
Ciboules, green, per bunch	0	0	3	0	0	0
Leeks, per dozen bunches -	0	0	9	0	1	3
Garlic, per pound - -	0	0	6	0	0	8
Shallots, per pound - -	0	0	8	0	1	0
Asparaginous Plants, Salads, &c.						
Asparagus, per 100 - -	0	8	0	0	10	0
Second size - -	0	4	0	0	6	0
Middling - -	0	2	6	0	3	0
Sea-kale - - -	0	1	0	0	2	6
Lettuce, Cabbage, per score	0	0	6	0	0	9
Endive, per score - -	0	1	6	0	2	0
Celery, per bundle (12 to 15)	0	0	9	0	1	9
Small Salads, per punnet -	0	0	2	0	0	3
Watercress, per dozen small bunches - -	0	0	4	0	0	6

	From			To		
Pot and Sweet Herbs.	£	s.	d.	£	s.	d.
Parsley, per half sieve -	0	2	0	0	2	6
Tarragon, dried, per doz. bun.	0	3	0	0	0	0
Fennel, per dozen bunches	0	1	0	0	0	0
Thyme, per dozen bunches	0	2	0	0	3	0
Sage, per dozen bunches -	0	2	0	0	3	0
Mint, per dozen bunches -	0	6	0	0	9	0
Peppermint, dried, per dozen bunches - -	0	1	0	0	0	0
Marjoram, dried, per doz. bun.	0	1	0	0	0	0
Savory, dried, per doz. bun.	0	1	0	0	0	0
Basil, dried, per doz. bunches	0	1	3	0	1	6
Rosemary, per dozen bunches	0	4	0	0	0	0
Lavender, dried, per doz. bun.	0	2	6	0	3	0
Tansy, per dozen bunches	0	1	0	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Rhubarb Stalks, forced, per bundle - -	0	1	6	0	3	0
Edible Fungi and Fuci.						
Mushrooms, per pottle -	0	0	6	0	0	9
Morels, dried, per pound -	1	4	0	0	0	0
Truffles, per pound:						
English - -	0	14	0	0	0	0
Foreign, dried - -	0	14	0	0	0	0
Fruits.						
Apples, Dessert, per bushel:						
Nonpareils - -	0	10	0	0	15	0
Golden Pippins - -	0	6	0	0	10	0
Ribston Pippins - -	0	8	0	0	10	0
Golden Nobs - -	0	5	0	0	7	0
Baking, per bushel -	0	3	0	0	5	0
American - -	0	15	0	1	0	0
Pears, Dessert, per dozen:						
Beurré d'Hiver - -	0	6	0	0	8	0
Ne plus Meuris - -	0	6	0	0	8	0
Bon Chrétien - -	0	2	6	0	4	0
Chapman's - -	0	6	0	0	8	0
Baking, per half sieve -	0	1	6	0	2	0
Almonds, per peck - -	0	7	0	0	0	0
Walnuts, per bushel - -	0	10	0	0	16	0
Chestnuts, Spanish, per peck	0	3	0	0	5	0
Pine-apples, per pound -	0	7	0	0	10	0
Grapes, per pound:						
White Portugal - -	0	0	10	0	1	3
Black Portugal - -	0	1	6	0	2	0
Oranges per dozen -	0	0	9	0	2	0
Oranges per hundred -	0	4	0	0	14	0
Bitter Oranges, per hundred	0	8	0	0	14	0
Lemons per dozen - -	0	0	9	0	2	0
Lemons per hundred -	0	5	0	0	12	0
Sweet Almonds, per pound	0	2	0	0	2	3
Brasil Nuts, per bushel -	0	12	0	0	16	0
Barcelona Nuts, per peck -	0	5	0	0	0	0
Spanish Nuts, per peck -	0	3	6	0	4	0

Observations. — The unusual and uninterrupted openness of the season has enabled the growers to continue supplying the market regularly; so that little fluctuation has at present taken place in the prices of vegetables, which have been brought in tolerable quantities, and of excellent quality. This has, in a measure, remedied the apprehended scarcity from the preceding dry weather in August, September, and October; so that foreigners, who visit our market, frequently observe that we experience here no difference in winter and summer; that we are equally well supplied in the different seasons with the respective articles, which with them is not the case. This is in a great measure true, but not altogether attributable to the causes which they assign, but rather to the extraordinary industry of the cultivators, and, I presume, the higher state of the art of horticulture, as practised here, compared with that where even the climate does so much to assist it.

Forced asparagus is now becoming general, and of good quality: a fine specimen of it has been seen, imported from France, evidently under a different system of culture, as it closely resembles the new variety of Grayson's in its natural state. We have yet to acquire the knowledge how this is to be obtained here. On referring to the *Bon Jardinier* for 1834, I find the plan described there, and it would, I think, be well worth inserting in your Magazine.

Of sea-kale we have a good supply, of excellent quality; and, I believe, in this we stand unrivalled; for few foreigners, to this time, appear even to estimate its true value as a vegetable, and have not as yet brought it into culture generally. From our intercourse with France, the culture of it there is likely to become more general, as it is highly recommended to the attention of the public in the work referred to before. Broccoli has been furnished in tolerable abundance, and, should the present open season continue, will be so throughout the spring, as there appears to be a large breadth planted out late in the autumn. In no article has there been more evident improvement (from competition), most of the extensive growers having a variety or two peculiarly their own, effected by hybridising one or more good sorts. The supply of colewort cabbage has also been very general; and even in this article there is evident improvement, as most of the growers pay more attention to the variety in use for it. Formerly it was generally the large loose Battersea cabbage planted out for the purpose of bunching; now the dark-green Lancashire colewort is extensively cultivated, and gives to the grower an equal return, as the quantity from an acre is quite equal to the former, from being planted closer in the rows. Turnips have been generally good; the late-sown crops rather small. Carrots, owing to the prevalent drought in the summer, have not been so fine as usual, but have been in moderate supply. Potatoes continue to be furnished in quantity of good quality, but maintain an equal price. This is, I believe, owing to the general deficiency of the crop.

Apples are supplied altogether from our own growth; very few foreign have yet been imported, or are likely to be, as our own stock is yet very good: indeed, with tolerable seasons, we shall always have enough, as our plantations are now much more extended, and, from the introduction of so many new varieties, generally more productive. Of pears we have no supply at present: it will require time, care, and attention to effect a change in this article, equal to the present demand for it. — *G. C.*

ART. VIII. *Supplement to the Notices of the Provincial Horticultural Societies for* 1833.

IN our last Number (IX. 751.) we promised to give, in a supplement, all the notices of meetings of the provincial horticultural societies which might be sent to us between the middle of October, 1833, and January 1. 1834. We now redeem our pledge; and we are glad, at the same time, to notice some newly formed societies, which will be found mentioned under their proper heads.

ENGLAND.

BEDFORDSHIRE. — *Bedfordshire Agricultural Society. Oct.* 9. Some very large cabbages were shown by Samuel Crawley, Esq. M.P.; the heaviest of which weighed 40 lbs., and the lightest 30 lbs. (*Weekly Dispatch.*)

BERKSHIRE. — *Kindbury Florists' Society. June* 22. This show, limited to pinks, is remarkable for being the first pink show established in England. The present was its 54th anniversary.

CAMBRIDGESHIRE.—*The Cambridgeshire Horticultural Society. Nov.* 20. The prizes were given for grapes, apples, and pears, chrysanthemums, and culinary vegetables. Among the latter were two dishes of the *O*'xalis crenàta, and it was stated that the stalks of this plant form an admirable substitute for those of rhubarb in pies and puddings. We, however, have tried them, and think them rather insipid, resembling vegetable marrow much more than rhubarb. A glass of honeycomb, taken without disturbing the bees, and weighing 14 lbs., gained a prize. This Society gives two distinct sets of prizes to cottagers: one for productions exhibited, and the other for the best cultivated gardens. Both cannot fail to do much good. (*Cambridge Chronicle*, Nov. 22. 1833.)

CORNWALL. —*Royal Horticultural Society of Cornwall. Oct.* 23. Sir Charles Lemon, the President of the Society, addressed the meeting, and expressed the pleasure he felt, again to see so beautiful an exhibition of flowers and fruit. Amongst the brilliant collection, it was impossible to pass over some beautiful specimens of exotics, grown in the open air by Mrs. Fox of Falmouth. Amongst the fruit there were some very fine specimens of pine-apples, &c.; and amongst the cottage articles several which proved that the attention of the Society to that branch of its objects had not been wasted. Miss Warren, whose name was already known as a benefactress to the Society, had contributed a collection of 330 specimens of indigenous plants, beautifully preserved and arranged; and Miss Fox a collection of cryptogamous plants. He added, that the new heath which was discovered by a lady, five years ago, in the neighbourhood of Truro, had been lately found by Professor Henslow on Poole Heath, in Dorsetshire; and that the parish of Mylor, in Cornwall, contains, growing naturally, every species of English heath. He then exhibited specimens of a variety of pinaster, the singularity of which consisted in the formation of the cone, which was longer than that of the common pinaster, and sharp at the points: its growth is likewise different, being in a zigzag form. A paper was read on this subject, at a Meeting of the London Horticultural Society. (See Report, IX. 727.) Sir Charles concluded by saying, that, the close of the second season having now arrived, it was impossible to refrain from an expression of some surprise and pleasure that the Society had made such progress in so short a time. General and universal botany has received augmentations at its hands, by the new plants brought to our knowledge by members of the Society. The Gesnèr*ia* of Captain Sutton, which will in future bear his name, is determined to be a new species; and the same may be said of an Amarȳlli*s*, brought home nearly at the same period by Lieut. Holland, of the Royal Marines. Last year several new plants were brought into notice by members of the Society; such, for instance, as the Passiflòra Sullivàn*i*, raised from seeds procured by Lieut. James Sullivan, R.N.; the Benthàm*ia* fragífera, &c. The lists of prizes were then read over. The collection of fruit was very extensive, comprising several handsome well-grown specimens of pine-apples, and a large assortment of grapes, melons, pears, and apples. Some white currants, raspberries, peaches, and cherries were also exhibited. Among the peaches we remarked a yellow-fleshed variety from the garden of S. S. Street, Esq., of Penryn. A dish of oranges, grown in the open air, without the aid of glass, attracted general admiration. The assortment of flowers was not so extensive as usual. A fine plant, in flower, of a species of Hedȳchium, from the garden of Michael Williams, Esq., of Trevince, was much admired. Although not a new plant, it is one which is seldom seen in such perfection. We were also pleased to see some of our favourite plants, such as Borò*nia* pinnàta, *Pol*ȳgal*a* grandiflòra, *P.* cordifòlia, and *V*erbèna venòsa. Thirty-eight cottagers' prizes were given; and Captain Parkyn, the honorary secretary, took occasion to notice the great improvement which had taken place in the gardens of this useful class of society. (*Cornwall Royal Gazette*, Oct. 26. 1833.)

DEVONSHIRE. — *North of Devon Horticultural Society. Oct.* 9. The prevailing flowers displayed upon this occasion were the various kinds of the georgina which have found their way into this neighbourhood; and these, of which there was almost an infinity of brilliant specimens, were most fancifully and elegantly disposed, agreeably to the varied tastes of their cultivators, in crowns, stars, and other devices. The letters R and F (Rolle and Fortescue), at the head of the room, were formed of oak leaves and acorns with much ingenuity. The entrance to the room, from the foot of the stairs, was profusely dressed with evergreens and flowers. On looking at the fruit table, we were highly gratified to see the variety and quality with which it was stored. The pines and melons were of the finest description, both in size and flavour. There were peaches, plums, and almost every other kind of table fruit, in great perfection, and a large collection of apples and pears. A dish of grapes of the Black Hamburgh, grafted on the White Muscat of Alexandria, belonging to Mr. Griffin, was much noticed: the berries had altered their appearance, and assumed that of the grizzly Frontignac, but had not the flavour. The culinary vegetables, taken generally, far surpassed any we had ever before seen in this part of the county: celery, broccoli, peas, onions, potatoes, carrots, parsneps, &c., were all excellent. Mr. Burge, nurseryman, produced two superior specimens of mushroom vegetable marrow [?]; and there was a fine specimen, much admired, of Emmett's Camberwell double-curled parsley, exhibited by R. W. Dickenson, Esq., of Ilfracombe. Every person, we believe, who took a view of the room appropriated to the cottagers' use, will say that it merited a very large share of the praise bestowed upon the exhibition. (*County and North Devon Advertiser*, Oct. 11. 1833.)

ESSEX. — *Chelmsford and Essex Floral and Horticultural Society. Nov.* 30. On this day thirty ladies and gentlemen, members of the Chelmsford and Essex Floral and Horticultural Society, paid a visit, by invitation, to the Hyde, the seat of J. Disney, Esq. F.H.S. R.S.A., and President of the above Society, to view his winter fruits, and were highly delighted with the various sorts of apples, pears, grapes, melons, &c., all named and numbered according to Lindley's arrangement. After viewing the same, the worthy president explained to the company the best sorts for cultivation, for table, and for culinary purposes; and recommended the use of ornamental flower-pots, made by Mr. Christy of Broomfield, from models by himself, instead of the plain sort now used for rooms. [We should be glad to know where these pots are to be had or seen in London.] After viewing Mr. Disney's excellent collection of sculptures, and some beautiful landscapes painted by Mrs. Disney, the company examined a chain bridge built from Mr. Disney's own architectural design, on an entirely new plan. [We should be most happy to receive a sketch and some account of this bridge, for our forthcoming *Architectural Magazine*.] The president then pointed out the different trees in his gardens and grounds from which the fruits were gathered, with methods of keeping and pruning: he likewise recommended the keeping of hedgehogs in enclosed gardens, for the destruction of slugs and snails. The park grounds and walks appeared to be laid out with great taste and judgment. After above three hours' stay, the company departed, highly gratified with the attention paid them by the worthy president and family. (*Chelmsford Chronicle*, Dec. 6. 1833.)

LEICESTERSHIRE. — *Leicester Horticultural Society. Sept.* 12. The fruit was in great abundance, and of excellent quality; but the flowers were not so numerous as was expected, owing to the severe storms of the 30th and 31st of the preceding August. Some fine georginas were, however, shown, and many prizes were awarded. Mr. Warner was by far the most successful candidate.

Melton Mowbray Florists' Society. — May 24. This was the first show of the Society, and was entirely for tulips. The flowers were very fine, and were much admired.

Tamworth Horticultural Society. — *May* 1. This was the first exhibition of this Society also, and prizes were given for auriculas, fruits, and culinary vegetables. Among the latter were some black and white Spanish radishes, exhibited by Mr. Buck, which were very much admired.

MIDDLESEX. — *London. Meeting of Market-Gardeners. Dec.* 10. A meeting of market-gardeners and others interested in the new markets of the metropolis was held this day at the Freemasons' Tavern, and Mr. Wilmot was called to the chair. The secretary read "the report of the sub-committee appointed at the last special general meeting of the Market-Gardeners' Society, to ascertain the extent, accommodation, and tolls of the fruit and vegetable markets newly formed, with other matters connected therewith." With reference to the Portman Market, the report was altogether favourable. The committee called the attention of the meeting to the extent of the yearly waggon and basket stands of this market; the width of its gangways (the two latter being secured from the weather by well-adapted coverings); the number of its shops, sufficient without excess, and those spacious and equal to a great share of business; a casual market, which is closely attached; and, almost to an unlimited extent, commodious, extensive, and cheap stabling. The approaches are good, as well as the roads; and all combine to secure attention and support. In adverting to the Hungerford Market, the committee say, the commodious size of the projected stands is highly deserving of the best attention of the meeting, and particularly of those to whom room is a material object; as a basket stand is not only joined to that of the waggons, but another, of considerable dimensions, directly opposite, on the other side of the gangway, may also be secured. Mr. Hutchins moved a resolution, that the projected accommodation offered by the Court of Directors of the Hungerford Market Company cannot be accepted on the terms proposed, viz. 15*l.* per annum for the rent of a cart and pitching stand. After some conversation, the resolution was carried unanimously. A great loss annually occurring to market-gardeners in and about the metropolis, from the non-return of baskets, sacks, &c., or their injury by carelessness on the part of the porters and others employed in the various markets, certain resolutions, having for their object a prevention of this evil, were put and carried unanimously. Thanks were voted to the chairman, and the meeting separated. (*Morning Chronicle*, Dec. 12. 1833.)

Metropolitan Society of Florists and Amateurs. — Meetings are held at the Crown and Anchor Tavern, Strand, the first and third Tuesdays in every month, at six o'clock in the evening, to afford opportunities of giving any information the members may think interesting, of proposing any thing they may consider advantageous, and of introducing any thing they may possess new. At such meetings, written communications, or papers upon the nature or culture of flowers, or other matters connected with floriculture, given to the Society, will be laid before the members, proposals for new members received, and subjects relating to the objects of the Society discussed.

At the meeting, October 9., it was resolved, "That those of the Society who attend the meeting shall be allowed to present lists of any superior articles of stock they have to supply, and lists of any articles of stock they may require; and that such lists, or so much thereof as the members presenting them wish, shall be inserted in the circular for the next meeting, and forwarded to the members as soon as possible." It was further determined, "That any member being in want of stock offered, or being able to supply the stock required, and forwarding a letter, postage free, to that effect to the chairman of the committee, at the Crown and Anchor Tavern, Strand, he shall be immediately referred to the parties concerned." [We have seen eight lists of the description alluded to; five of articles offered, and three of articles wanted. The idea is good, and is worth adopting by other societies.]

NORFOLK. — *The Launditch Norfolk Association for promoting industrious Habits among Servants, Cottagers, and Labourers. Oct.* 30. The sum of 55*l.* was distributed in premiums of from 5*s.* to 5*l.* amongst forty-six individuals. Among the prizes were the following: — Onions: Edmund Dye of Mileham grew 11 stone 6¼ lbs. on 15 yards of ground; and Thomas Gant of Litcham grew 18 stone 6 lbs. from 24 yards. Potatoes: Thomas Ward of East Bilvey grew 7 bushels and 1 peck from a rod of ground, or what was equal to 388 sacks 2 bushels an acre, which at 4*s.* a sack, the present price of potatoes, would quote 77*l.* 14*s.* 8*d.* an acre. William Rawlinson of Lexham grew 12 bushels 3½ pecks from 63 yards; and William Seaman of the same place grew 11 bushels from 57 yards. (*Weekly Dispatch*, Nov. 4.)

NORTHUMBERLAND. — *Newcastle Botanical and Horticultural Society. Oct.* 25. We particularly noticed 12 very large oranges, and 7 large shaddocks, grown in the garden of J. C. Anderson, Esq., Little Benton; and 21 sorts of pears from the garden of the Rev. J. Cook, Newton Hall, near Alnwick, for which silver medals were awarded extra; likewise a large Santa Cruz pine-apple, weighing 6 lbs., grown in the garden of William Russell, Esq., Brancepeth Castle. The articles shown were of the very first description. (*Newcastle Courant*, Nov. 2.)

NOTTINGHAMSHIRE. — *Nottingham Floral and Horticultural Society, Bromley House.* A great number of prizes were distributed for georginas and fruits.

OXFORDSHIRE. — *Henley Horticultural Society* was established, Nov. 4. 1833, and a printed copy of its rules, &c., has been sent to us. Nothing can be more respectable than the list of patrons and patronesses, &c., and we need hardly add that we most sincerely wish it success.

Oxford, Dec. 20. Mr. Wheeler has procured a dozen sorts of chrysanthemums from British seeds, said to be of great merit, which will be sold to the public next spring, as noticed in our advertising sheet.

SOMERSETSHIRE. — *Bath and West of England Agricultural Society. Dec.* 17. This Society embraces territorial improvement generally; including planting, and, to a certain extent, gardening. At this meeting Captain Scobell and the Marquess of Lansdowne confirmed, from their own experience, the advantages of adding gardens to the cottages of the poor. The Marquess of Lansdowne observed, that, if the granting of an allotment to a labourer did not lead to his keeping a pig, it would not have attained its object. Mr. Hall submitted a new plan of fencing, the principle of which was, strength from position, rather than from substance. The usual system is to have perpendicular posts plunged 2½ ft. in the ground; but, in the plan he now proposed, the posts need only be placed 8 or 9 inches in the ground. [We suppose, the ground plan of the fence must be zigzag in direction, and the posts inclined inwards; but we shall write for particulars.] (*Weekly Dispatch*, Dec. 23.)

SURREY. — *Dorking Horticultural Society. Sept.* 28. 1832. This was the first exhibition for fruit and georginas. The chief prize for the latter was gained by Mr. Wood of Deepdene.

April 19. 1833. The principal objects of attraction at this meeting were, a new calceolaria, shown by Mr. Wood; and some apples, with an account of the mode of keeping them, by Mr. Lelliott.

May 25. A new alstrœmeria was shown by Mr. Scott.

June 23. An extra-premium was given to Mr. March, for a collection of Spanish iris.

August 27. This meeting was by far the largest. Mr. March showed the best pine, and Mr. Wood the best melon. Twenty-six prizes were distributed.

Sept. 28. An anniversary meeting was held, and resolutions passed, illustrative of the objects of the Society, which, it was stated, had then increased to 100 members.

SUSSEX. — *Newick Horticultural Society. Sept.* 12. Nearly 500 productions were exhibited for competition. Among the plants sent by nurserymen were the following: — Mr. Cameron, Uckfield, exhibited a superb bouquet, for which he obtained the Society's silver medal. It consisted of about 200 fine georginas, some fine German asters and a great variety of other flowers. The novelty of its form and its beauty were much admired. Mr. Cameron also presented twenty sorts of apples selected from 150 of the most approved varieties, and numerous plants in flower. He presented a specimen of the six weeks' turnip, and also a sample of the Maltese turnip: the former was considered deserving the attention of the agriculturist, from its hardy nature and the quickness of its growth. The peaches which obtained the first and second prizes were from trees furnished by Mr. Cameron a few years ago. — Mr. Wood of the Woodlands Nursery, Maresfield, exhibited about 100 pots of fine plants; nearly 200 sorts of georginas, which were much admired; a very splendid collection of China and Noisette roses, and 150 sorts of apples and pears. He also exhibited about 100 vases of cut flowers, and a variety of specimens of curious oak, ash, alder, elm, &c. The flowers were remarkably fine, and were very much admired. Mr. Mitchell of Piltdown exhibited a fine collection of heaths, with some stove and green-house plants, georginas, and German asters. A splendid seedling georgina, upwards of 5 inches in diameter, raised by Mr. Read, was greatly admired, and received the name of Lord Abergavenny. Mr. Pierce of Piltdown exhibited some fine plants of the Wistària Consequàna; a collection of fruits, including several varieties of filberts, nuts, &c.; some beautiful French and African marigolds; and a splendid bouquet, for which he obtained the Society's silver medal. (*Sussex Advertiser*, Sept. 16. 1833.)

WARWICKSHIRE.—*Birmingham Botanical and Horticultural Society.* Through the kindness of Messrs. Pope and Sons, we have been favoured with an account of several meetings of this Society, which had not before been sent us. We regret to say that we received Messrs. Pope's parcel too late to allow us to do more than give a very cursory notice of its contents.

July 17. *and* 18. The plants were exhibited in a temporary erection, 80 ft. by 20 ft., on a fine terrace in the garden, and marquees were erected for the company on the extensive and undulating lawn below. Above 3000 persons were present, including all the nobility and gentry in the neighbourhood. Numerous fine plants were exhibited, and the general brilliancy of the scene exceeded all description. (*Aris's Birmingham Gazette*, July 22. 1833.)

Sept. 18. *and* 19. This show was also very brilliantly attended. The stove plants, the georginas, and the fruit elicited warm admiration. The vegetables were so numerous, that they were exhibited in a separate tent. (*Ibid.*, Sept. 23. 1833.)

Oct. 16. *and* 17. The prize for the rarest plants in flower was gained by Messrs. Pope and Sons, who exhibited Nierembérgia intermèdia, Portulàca grandiflòra *B. M.*, Portulàca Gillièsii Hook., Selàgo Gillièsii Hook. (*Ibid.*, *Oct.* 21. 1833.)

Deritend and Bordesley Floral and Horticultural Society. — It should be observed, that Deritend and Bordesley are extensive and populous suburbs of Birmingham; and that a gentleman residing in Bordesley, Mr. Kendall, was chiefly instrumental in establishing this Society. The principal objects aimed at are, to encourage horticulture and floriculture in a populous district, and to disseminate useful information and new plants among all who possess a fondness for horticultural pursuits. To render the Society as useful as possible, a portion of its funds are set apart for the purpose of giving prizes to such cottagers and artisans (subscribing each 2*s.* 6*d.* per annum) as shall exhibit.

May 2. This was the first meeting of the Society, and a number of articles were exhibited. Some of the most beautiful plants were from the stoves and gardens of Mr. Kendall, Mr. Willmore of Oldfield, and Messrs. Pope and Sons. Among the vegetables were some heads of asparagus, forced by Mr. Kendall, in four days, by hot water.

May 30. This was the second show of the Society, and the first at which prizes were given to artisans: eleven of these prizes were distributed; three of which were gained by one individual, Mr. C. Hopkins. A number of beautiful plants were lent by the Botanical and Horticultural Society; a pleasing proof of the harmony subsisting between the two Societies. (*Birmingham Journal*, June 1. 1833.)

June 20. A remarkably fine display of roses was sent by the Earl of Bradford; and a Gloriòsa supérba, from the stove of John Willmore, Esq., of

Oldford, was much admired. Twenty-two prizes were given to artisans; and the stand devoted to the articles exhibited by this class presented a most gratifying display. (*Aris's Birmingham Gazette*, June 24. and July 1. 1833.)

August 1. Carnations, georginas, and gooseberries were the principal articles exhibited. There were twenty-one artisans' prizes. The largest gooseberry, the Roaring Lion, weighed only 21 dwts. 12 grs. (*Ibid.*, August 12.)

Sept. 12. A superb crown of georginas, from the gardens of Messrs. Pope and Sons, excited great admiration. Twenty-five prizes were given to artisans; among the names of the successful competitors, we observe that those of Amos and Chaplin occur most frequently. (*Birmingham Journal*, Sept. 1. 1833.)

Nov. 21. This was perhaps the most brilliant exhibition of the season. The chrysanthemums, the stove and green-house plants, and the splendid collection of fruits (the latter exhibited chiefly by Mrs. Wakefield), vied with each other in exciting admiration. Only ten artisans' prizes were given. (*Birmingham Advertiser.*)

WILTSHIRE. — *Salisbury Annual Pink Show. June* 21. Some very fine flowers were exhibited; and prizes were gained by Messrs. Squib, Chinn, and Bowden.

YORKSHIRE. — *Barton Georgina Show. Oct.* 7. Mr. William Brown of Mount Pleasant, seedsman, exhibited a very splendid collection of georginas, in the shop of Mr. Hattersley, druggist, which was visited by hundreds of the inhabitants of the town and neighbourhood, who expressed their high gratification at the interesting sight. A remarkably fine bouquet, which completely filled the window, called forth especial admiration. This is the second exhibition of the kind in Barton, but it is by no means likely to be the last. (*Hull Advertiser*, Oct. 11. 1833.)

Doncaster, Retford, and Bawtry Horticultural Society. — *Sept.* 24. The show of fruit and vegetables, particularly of the former, was very extensive, and in point of size extraordinary. These occupied one table; on another the plants were arranged, and on the right the georginas displayed their varied and splendid beauties. Although the season for the cultivation of these elegant flowers has on the whole been so unfavourable as to warrant the expectation that in this respect the exhibition would be defective, the reverse of disappointment was experienced; and, as the eye glanced along the stage which supported them, the contrast presented by the varied hues was striking and truly gratifying. During an exhibition of this nature, there is one subject which cannot fail to strike the attention of the observer: viz. the degree of perfection which can be attained by the application of skill and labour in cultivation. As the importance of this is fully manifest, the encouragement of societies of this description is the means of conferring gratification and benefit upon the community at large. (*Doncaster, Nottingham, and Lincoln Gazette.* Sept. 27. 1833.)

Hull Florists' Society. — *Oct.* 7. The display of georginas was most splendid. The flowers, of which there were some hundreds, were in the highest state of perfection, and imbued with the richest hues. From the testimony given on this occasion of the ability of the florists of this town and neighbourhood to cultivate the georgina, we are induced to believe that they are capable of competing with any other society of the kind in the kingdom. Few other articles were exhibited. (*Hull Advertiser*, Oct. 11. 1833.)

Dec. 23. This show was for chrysanthemums, and some remarkably fine flowers were exhibited. Among the names of the chrysanthemums exhibited we observed the following, which we cannot find either in the *Hortus Britannicus*, or in Mr. Haworth's excellent paper on chrysanthemums in this Magazine (IX. 218.). Pak tseen yong Kokfa, and yung sham hong Kokfa, Mr. D. Brown; white velvet, expanded light rose, and imperial lilac, Mr. W. Dennis; tufted yellow, and quilled red, Mr. T. D. Dobson; golden-fringed yellow, Mr. Priest; dark crimson, Mr. Robert Oglesby; shining-fringed white, embroidered yellow, and dark orange, Mr. Hodgson (gardener to H. Blundell, Esq.); golden-feathered yellow, tall strong-scented rose, imperial red, Spanish crimson, and superb orange, Mr. Anderson; Dutch pink, Cox's buff, and quilled brown, Mr. Wharton. We hope that cuttings of these sorts, supposing them to be really new, will soon find their way to the London Horticultural Society, and thence, with proper names, to the commercial gardeners throughout the country.

Sheffield Horticultural Society. — *Sept.* 25. Georginas formed the floral part of the exhibition, and the display was most superb and extensive. One of the townsmen was particularly successful in carrying off prizes for this description of flowers, and another of them produced a seedling of a darker colour than any yet grown, and so remarkable for beauty and accuracy that it will not be easily surpassed. A beautiful design, formed of georginas, a representation of the Wharncliffe arms, was prepared by Mr. Harrison. Our attention was also arrested by a splendid leaf of the talipot tree. His Grace the Duke of Devonshire was a very extensive and most successful contributor to this exhibition. In fruit there was nothing so rare and estimable as the Ispahan melon. The grapes were truly excellent, and so were the pines. In vegetables we have never seen finer endive or better cucumbers, and the celery was of a first-rate description, as well as the broccoli and savoys. In fact, without descending farther to particulars, we may safely affirm that a better exhibition will not occur this year in England. This is but the third year of the Society's existence, and yet it can vie with any similar institution in its periodical displays. We are happy to observe a decided improvement every year. (*Sheffield Iris*, and *Weekly Dispatch*, Sept. 30.)

Some of the heads of celery exhibited at the August show measured 3 ft. 6 in. in length, and 9 in. in circumference, after the outer leaves were stripped off. (*Weekly Dispatch*, Sept. 30.)

We understand that the subscribers to the Sheffield Botanic Garden increase daily, and that there can be no doubt of its being speedily carried into execution. (*Ibid.*)

WALES.

Glamorgan and Monmouthshire Horticultural Society. — *Sept.* 25. No pines were exhibited; the nobility and gentry in the neighbourhood having "concurred in the exclusion of those costly and luxurious productions, in order to allow of larger and more numerous prizes being granted to industrious cottagers." Among many new varieties of apples and pears lately introduced into Glamorganshire, a Marie Louise pear, exhibited by John Moggridge, Esq., of Gabalva, excited great admiration. Mr. Miller of Bristol sent some very fine georginas and German China asters.

Swansea and Neath Horticultural Society. — *Nov.* 28. The room was ornamented with a good collection of chrysanthemums, interspersed with choice flowers and some fine winter fruit, especially apples. We mention this, as we consider it as proving the capability of this country to produce apples equal to any county in England, certainly for a space of nearly 30 miles. The apples from Yniscedwyn satisfied every wellwisher of horticulture, that, even so high up the valley, the coldness was no barrier to their full maturity; and at this meeting the apples from Fairy Hill, beyond Cefn Bryn, called forth the approbation of our best gardeners, and gratified every amateur present. The specimens sent by the Rev. S. Phillips (12 in number) were well ripened, formed, and coloured; and we judge (and, we think, accurately) that from the lower part of Gower to nearly the top of the Swansea Vale there is hardly a spot on which the apple might not be planted with profit. We are glad to hear the Society purposes giving additional prizes to cottagers of young and valuable trees, provided they can show their means of planting them; the thought is pleasing: and we hope this Society, in a few years, will be awarding prizes for the fruit grown on trees planted by its instigation; thus demonstrating that there is more in it than merely collecting flowers, fruit, and vegetables, to gratify the eyes of the subscribers for the day. The Chaumontel pears from Sketty Hall and Singleton, and the Ribston pippins from Heathfield, deserve the highest praise. These last were part, we believe, of 400 gathered from one tree, and were superb fruit. We think we are correct in saying that Mr. Calvert Jones was the gentleman who introduced the Ribston pippin into this county, upwards of 40 years ago. Twenty-two cottagers exhibited flowers, fruit, and vegetables, for rewards, in the year, and they received amongst them 56 prizes, amounting to *9l. 5s.* Last year there were but 13 exhibiters, and the amount of their prizes was *4l.* *10s.* (*Cambrian.* Nov. 30. 1833.)

SCOTLAND.

Fifeshire. — *The Dunfermline Ancient Society of Gardeners* is among the most ancient horticultural societies in Scotland; its first minute is dated Oct. 16. 1716; and among its members it has possessed one duke, one marquess, six earls, seven lords, eight knights, two colonels, six captains, three lieutenants, four ensigns, one professor, six ministers, seven advocates, two writers to the signet, twenty-one doctors and surgeons, and one hundred and ten gentlemen of landed property. This enumeration will serve as much as anything to show the estimation in which it was held in its early days: and we find on the 10th of October, 1722, the following subject for an essay given out to David Bowie, gardener: — "On the circulation of the sap in vegetables, and a reason why brambles, allars (alders), and sallows are of such large pith, and put forth larger growth the first year than those of smaller pith, such as oaks, box, &c." Nothing more is said than that the thanks of the meeting were given to the orator. How Mr. Bowie acquitted himself we can only guess: the subject given him would be a puzzler to the vegetable physiologists of the present day. We likewise find that there were committees of this Society held in Edinburgh and Cupar; from which it would appear that there were at that time no horticultural societies in these towns. (*Scotsman*, July 6. 1833.)

At the October meeting of this Society, prizes were awarded for vegetables and fruit as follows: — Carrots: for the heaviest 3, which weighed 7 lbs. 10 oz., Mr. Fowlis, Fordel; for the next 3, 7 lbs., Mr. Hogg, Pitfirrane: — Apples: 3 Yorkshire Green, weighing 2 lbs. 5 oz.; 3 Stoup Leadingtons, 1 lb. 15 oz.; 3 Gansel's Bergamot pears, weighing 2 lbs. 1½ oz.; the largest one 13¾ oz., and measuring in circumference 11½ inches; the largest apple measuring 12½ inches in circumference. Mr. John Reid, Pittencrieff, exhibited a bottle gourd, weighing 15¼ lbs. (*Ibid.* Nov. 20. 1833.)

The Kirkaldy Horticultural Society was established on the 1st of August, 1833, by twelve practical gardeners. Their first meeting was held Sept. 12., when seventy members were present (chiefly amateurs), and prizes were awarded for a great number of floricultural and culinary articles. The prize schedule for 1834 enumerates the article for which prizes will be given, and concludes with the following excellent subject of competition for young gardeners: — A prize will be given to "the apprentice or journeyman gardener, employed by any member of the society, who produces the largest collection of species (excluding varieties) of British or exotic plants, gathered and dried in flower or fruit, and named and arranged according to the natural system: the collection to be delivered to the secretary before the 1st of September, accompanied by a sealed note (motto outside), enclosing the address of the competitor, and a declaration that the plants were gathered by him since the 24th of September, 1833. The collections to be returned." — *John Sang, Sec.*

Lanarkshire. — *Glasgow Horticultural Society. June* 21. Several specimens of the choicest flowers were shown, the vegetables were early, and excellent; and the fruits were of the finest quality. A new and splendid amaryllis from the botanic garden, and some very fine May duke cherries, from Erskine House, excited much attention. The latter did great credit to the very excellent gardener, Mr. Shiells.

Mid-Lothian. — *Edinburgh Horticultural Society. Dec.* 12. The secretary exhibited several large blanched specimens of the prickly cardoon, or cardon de Tours, from the garden of Thos. Guthrie Wright, Esq., Duddingstone Cottage (Mr. John King, gardener), and stated that the blanching had been accomplished by using hypnum moss in place of straw ropes, the former material being preferable, as communicating no bad flavour to the cardoon. The Society's premium for the best collection of seeds of evergreen trees and shrubs saved in Scotland was given to Mr. John Street, gardener at Biel, who sent a parcel containing considerable quantities of common laurel, Portugal laurel, and laurustinus, with small quantities of the seeds of Chinese arbor vitæ and sweet bay. Very fine bunches of black Hamburgh and white muscadine grapes were then placed on the table, the produce of a flued wall at Erskine House garden, without the aid of glass, and gathered on the 4th inst. (See VIII. 671.) A letter from Mr. George Shiells was read, mentioning that the family had been supplied with such grapes since the end of October, and that there were still about thirty bunches remaining. — The committee, lastly, called the attention of the meeting to several excellent articles, both fruits and roots, the produce of the Society's experimental garden, which did great credit to Mr. Barnet as a cultivator; and to a collection of *Chrysánthemum índicum* in flower, remarkable for the dwarfish size of the plants, grown in this way by Mr. Handasyde of Fisherrow. There was also a cluster of sweet oranges from the garden of Count Flahault, at Tulliallan, where six had been produced on a plant 2 ft. high. A communication was read to the meeting on the forcing and blanching of Buda kale, by Mr. James Mackintosh, gardener at Archerfield. The kale are planted in boxes, which are introduced successively into the mushroom-house, where the kale are at once forced and blanched (light being excluded), while the production of mushrooms is not interrupted. (*Weekly Dispatch*, Dec. 16. 1833.)

STIRLINGSHIRE. — The agricultural exhibition of Messrs. Drummond of Stirling, noticed in our preceding volume (p. 447.), is continued annually, and goes on prosperously. Similar exhibitions have been opened at Edinburgh, by Mr. Lawson, seedsman there; and at Perth, by Messrs. Dickson and Turnbull. The local benefits which will result from these exhibitions are immense. We should think they will be found to have as great an effect on the agriculture of their vicinities, as the publication of the *Farmer's Magazine*, in the beginning of the present century, had on the agriculture of the Lowlands of Scotland generally.

IRELAND.

Ballinasloe Horticultural Society. — *Aug.* 14. For fruit, flowers, and vegetables: the latter were remarkably fine. There were several cottagers' prizes; Martin M'Niel, and Dalton Kelly were the most successful among the cottage competitors. (*Dublin Evening Mail*, Aug. 26. 1833.)

Connaught Horticultural Society. — *Oct.* 12. This show was principally for fruit and vegetables. Among the latter were 12 heads of celery exhibited by Mr. Johnstone, gardener to the Earl of Clancarty, which weighed 54 pounds. One of carrots, exhibited by the same gardener, weighed 4 lbs. 2 oz. (*Galway Advertiser*, Oct. 19. 1833.)

Cork County and City Horticultural Society. — *Dec.* 16. A very numerous meeting of the nobility and gentry of the neighbourhood assembled to establish this Society. Major Beamish concluded an eloquent speech as follows: — "I trust that the country gentlemen, that the landed gentry of the county, will come forward with enlightened minds and liberal pockets on this occasion. They are, of all classes of the community, the most interested in the promotion of horticultural societies. By these means it is that the cultivation of land and the breed of cattle are improved, old and injudicious practices abolished, good systems of farming introduced, and the farm brought, as it ought to be, as nearly as possible, to the condition of the garden. By these means, also, are order, cleanliness, and industry, which are inseparable from good farming, induced among the small holders and peasantry; agricultural profits increased, and the wealth and happiness of both the owner and occupier of the soil promoted; while the scientific investigations to which the advancement of these noble objects must necessarily lead, will teach us all how to

> 'Find tongues in trees, books in the running brooks,
> Sermons in stones, and good in every thing.'"

(*Cork Evening Herald*, Dec. 20. 1833.)

Kilkenny Horticultural Society. — *Nov.* 7. We are extremely happy to find that a horticultural society is about to be established at Kilkenny, under the auspices of our scientific and much esteemed correspondent, Mr. Robertson, nurseryman there; whose valuable papers, both in the *Horticultural Transactions* and in this Magazine, must be well known to our readers. A newspaper (*Kilkenny Journal*, Nov. 16.) has been forwarded to us, containing the rules of this Society, and we have no doubt but that it will contribute very essentially to the promotion of horticultural and botanical knowledge in that part of Ireland.

Having now given such slight notices as our limits will allow, we cannot conclude this article without reiterating our satisfaction at the very general increase of horticultural and floricultural societies; the rapid distribution of new plants; and the great improvement which has taken place in the gardens of cottagers. Our indefatigable correspondent, Mr. Saul, informs us that the largest gooseberries grown this year are the Red Wonderful, 27 dwts. 17 grs., grown at Ormskirk, by Mr. Ralph Moon; the Yellow Gunner, 25 dwts. 2 grs., at Chester, by Mr. Coppack; the Green Peacock, 23 dwts. 4 grs. at Houghton Lane, by Mr. John Wood; and the White Eagle, 23 dwts., grown at Hooley Hill, by Mr. William Williamson. Mr. Saul adds, that the largest gooseberry grown in 1832, as he before stated (IX. 98.), was a green one, Bumper, which weighed 30 dwts. 18 grs. (above an ounce and a half); a size which no gooseberry has this year attained. Those who are desirous of seeing more minute details of the fruits and flowers shown in Lancashire and the adjoining counties will find them in the *Florists' Gazette*, published annually at Manchester, price 3*s.*— *J. W. L.*

ART. IX. *Obituary.*

DIED, at Kingsmeadows, Peebleshire, on August 28. 1833, *Mr. Sherare*, aged 78 years. He had lived as gardener at Kingsmeadows 33 years. His health had gradually declined through the last eighteen months of his life, and he expired without, apparently, suffering much pain. His son, a young gardener, who has a good knowledge of chemistry, and is one of our most promising correspondents, after stating the above facts, adds, "I have now neither father nor mother, brother nor sister: all are gone to their 'long home;' while I, the youngest of seven, am left behind to mourn their loss."

Died, at Brentford, November 22. 1833, in the same house in which he was born, *Mr. Hugh Ronalds*, nurseryman and seedsman, aged 74 years. The Brentford Nursery was established, nearly 100 years ago, by the father of the late Mr. Ronalds; and it continues, and we hope will long continue, in his excellent family. The late Mr. Ronalds was a most amiable man and a warm-hearted friend, and was enthusiastically fond of his profession. He was well skilled in fruits, especially apples, as is evinced by his *Pyrus Malus Brentfordiensis*, beautifully illustrated by drawings from nature, on stone, by his daughter Elizabeth; and he had great skill in raising flower seeds, for which the nursery has been long celebrated. From the ardent admiration which we have heard Mr. Ronalds express for Pain's Hill, Esher, and other fine old specimens of modern landscape-gardening, we are convinced that, had he turned his attention that way, he would have displayed superior taste in laying out grounds.

THE
GARDENER'S MAGAZINE,
APRIL, 1834.

ORIGINAL COMMUNICATIONS.

ART. I. *Notes on Gardens and Country Seats, visited, from July 27. to September 16., during a Tour through Part of Middlesex, Berkshire, Buckinghamshire, Oxfordshire, Wiltshire, Dorsetshire, Hampshire, Sussex, and Kent.* By the CONDUCTOR.

(*Continued from* p. 7.)

NUNEHAM COURTENAY, a Seat of the Archbishop of York, is a place which has long been celebrated. We first saw it in 1804, when we visited it in the course of our walking tour. The orangery, and the flower-garden laid out by Mason, were then in great perfection. The roof, front, and two ends of the orangery were movable; and the orange trees, being planted in the soil, when the frame was removed, and the ground turfed over, appeared as if growing in the open lawn. The trees were then in vigorous growth, and covered with flowers and fruit. These trees no longer exist, having been destroyed, partly through the difficulty of heating the house in the winter season; but chiefly, as report states, through the carelessness of the gardener, who succeeded the worthy old man who had charge of them in 1804. The present gardener, Mr. Brodie, informed us that he had seen pieces of the trunks of these trees nearly 1 ft. in diameter. The flower-garden is now overgrown with elms and other common trees; the number of the flower-beds is reduced, and the shapes of most of those remaining have been altered. The covered seats are either removed, or in a dilapidated state, and the same may be said of the statues, busts, and therms. Nevertheless, we recognised the scene at once, by the three low arched entrances of a small summer-house. This spot is no longer fit for growing flowers, from its being now too much under the shade of lofty trees. Extensive architectural alterations have been made in and about the house and offices, and improvements in the kitchen-garden have just been commenced, by doing first what is too frequently left to be done last, viz. building a good gardener's house. As it rained fast during the whole of the time we were here, we had little opportunity of examining things in detail. Nevertheless, we saw at a glance that the handsome terrace which has been added in front of the house is badly contrived, with reference to its connection with the pleasure-ground; a proof, in addition to those which we are continually observing, of the necessity of villa architects having a general knowledge of landscape-gardening. The direct fault of this terrace is, that the outlet from it to the grounds is badly placed. The terrace ought to have been returned at the south end, and the outlet so arranged as that the walk proceeding from it should have advanced in a straight line, and on a level, for at least some distance; whereas, in its present state, the walk takes a sudden turn, and ascends; two of the most undignified and unartistlike circumstances that can be imagined in such a situation. The arrangement of the going and returning walks in the pleasure-ground at Nuneham has always been unsatisfactory, and we recollect the old gardener, Stephenson, who showed us the original plan for laying out the grounds by Brown, acknowledging that this was allowed to be the case. The objection might be entirely done away with by means of a judicious terrace, but certainly not by the present one in its present state. If we have leisure, we may, perhaps, at some future opportunity, give a general idea to our readers how this is to be done; but, as to do it justice would require several engravings, we have not time to enter into it at present; we shall only say that nature has done much at Nuneham Courtenay; and that art, judiciously exercised, might render the pleasure-ground worthy of the place. One of the worst features about the park is the approach road; which, from the lodges, first ascends a hill by a direct line, and then descends to the house, having it full in view. Nothing can be worse, either in point of convenience or effect, than such an approach; and the evil can only be avoided by circuitous sweeps, disguised by scattered trees, so that the house shall not be seen at all, till the stranger arrives within a few yards of it; and finds himself on a level with, or, if possible, rather under the level of, the ground of the entrance front. This should be done in such a manner that the steepness of the road should in no part exceed one in forty. There are some formal unconnected clumps and belts, bounded by straight undisguised clipped hedges in the outer part of the park, and various other deformities there, which, of course, will be done away with as the improvement of the place proceeds.

Baldon House, opposite Nuneham Courtenay, was, in 1804, a residence of some note, and it has still in the grounds many of the elements of a fine place; such as abundance of wood, and a surface varied by undulations, with a good soil for pasture and trees. The plantations are much in want of thinning. By judiciously managing the fences of both parks which border the road, the one park might be made to lend great effect to the other.

Blenheim. — *August* 11. On the evening of our arrival, we went to the great gates of the approach from Woodstock, and entered, hoping to catch the last rays of the setting sun lingering on the towers of the palace, and to see the deep broad shade thrown on the surface of the lake by the colossal bridge, and the massive oak woods beyond; a spectacle which we had often enjoyed with delight in former times. The view altogether disappointed us; for, looking down on the lake, the surface of which is more than 100 ft. below the eye, half of it appeared quite green with aquatic weeds. Next morning we proceeded to the same gates with greater deliberation; but, previously to describing what we saw, it may be necessary to state that such were the care and study of the architect to connect his work with what surrounded it, and to give note of preparation of what was to follow, that he commenced his grand entrance by an outer entrance of ordinary width, between four piers connected by short walls. This narrow entrance leads to a square area about 100 ft. on the side, which forms the outer court to the triumphal arch of the gateway. The outer piers of the narrow entrance are beginning to decay; and out of one of them is growing a young ash tree, 5 ft. or 6 ft. in height, and out of the other a sycamore of about the same size. This affords a suitable note of preparation for the state of the lake, the bridge, and the exterior of the palace. The head, or dam, of the lake is so much out of repair, that it does not retain the water so high as it ought to do by several feet; and the water of the stream, instead of falling over the cascade as it used to do, finds its way under ground, and rises up like springs in the bed of the river and in the flat ground below. The joints of the masonry of the bridge are becoming the nidus of plants, and in a year or two this building alone will produce a tolerable flora. The side entrance, through which strangers are admitted to see the house, is beginning to be dilapidated, and a large portion of stone from the architrave over the gateway has lately splintered off and fallen down. The grand court of honour seems in better repair than any other part. The side courts require jointing, and protection by the repair of the roofs and copings. On first appearing before the entrance-gate of the outer court, one of the striking effects used to be the long architectural vista, seen through the first court, across the court of honour and across the third court; but this is now destroyed, in consequence of a hot-house having been put up in the third or stable court, which obtrudes its end across the line of archways. The duke has turned that court into a kind of melon, hot-house, or rubbish ground; and a strange place it is, taken altogether. On entering the grand hall, we were struck by the long vistas through doors to the right and left; and also by the view through two doors to the lawn in front: on turning round, and looking towards the bridge, the long straight avenue passing over it, and having in its centre, at a certain distance, the lofty column crowned by the statue of Queen Anne, completes the impression of dignity and grandeur. This avenue was formerly continued in a straight line for six or eight miles through the Ditchley and Heythrope demesnes, including the mansions of each in the line of the avenue. There is something very grand, and at the same time very sociable, in the idea of thus connecting three magnificent residences. We see from these straight lines, right angles, and lengthened vistas, how well Vanbrugh understood grandeur of effect, both in architecture and in the principal features of its accompaniments. The architecture at Blenheim has trifling faults of detail; such, for example, as the combination of the obelisk and the pilaster with the recesses cut into the latter at the side entrance; but, taking the pile altogether, we know nothing like it either ancient or modern. Some attempts were made, during the late duke's time, to improve the terminations of the towers; and even the present duke has tried an experiment of this kind: but, if it is allowable to make an attempt to improve one part, why not attempt to improve the whole? But this would be absurd; because the palace would then no longer be the work of Vanbrugh, or the national monument raised in honour of the first duke. In justice to the memory of both the great architect and the great warrior, we think every thing removed, either by the late or the present occupier, ought to be restored; and no farther liberties taken by the present or future possessors. Indeed, there must be something defective in the arrangement by which the heirs of the great Marlborough hold this property; otherwise neither these alterations could have been made, nor the lake and the building have been suffered to be so much injured by neglect as they now are.

After seeing the house, by the permission of the duke we were shown through the private garden. Much has been said respecting this garden, but there is, in truth, nothing remarkable in it; and the duke can only wish it to be kept private, in order to prevent his walks being intruded upon by the numerous visiters, who, every day in the year, come to see the house and grounds. Those who have seen Blenheim before this private garden was fenced off, will recollect the bank of lawn, commencing at the library front of the house, and extending to the cascade. They will also recollect the portion beyond the cascade, partly below it, containing some fountains; and partly above it, where there used to be some old mutilated statues. The lawn in front of the library, and these two portions of the grounds, are included in the duke's private garden; the extent of the three scenes being estimated at about 80 acres. There seems no reason why the occupier of such a place as Blenheim should not have a private garden, in the same manner as he has private apartments; but it is surely not allowable that, for this purpose, he should monopolise all that is by nature, as well as by the art which had been exercised before his time, the finest part of the grounds. What is, perhaps, as bad as this monopoly is, that a part of the grounds, still left open to the public, is disfigured by the main walk being included in what is now the private part, and by the necessity, which has been thus occasioned, of forming a new and smaller walk parallel to it. The one walk is separated from the other by a high fence, stuck full of furze bushes, so as to render it impervious to the sight: a very great deformity, and one which shows, on the part of those who put it there, an utter disregard of the general beauty of the place. We shall now notice the details of the duke's private garden.

Near the house, and from that to the cascade, the surface is sprinkled with choice trees and shrubs, planted in dug patches, in the usual manner. These patches seldom contain more than a single tree or shrub, or a standard rose, with a few flowers round its base. There are at the same time a number of large patches or masses, containing azaleas, rhododendrons, and other flowering shrubs, intermixed with flowers. Some of these masses are bordered by young oaks, twisted so as to form a wreath, care being taken, in pruning them, never to cut the leaves. In some cases, the common oak is used for this purpose, and in others, the Turkey: both form very beautiful edgings. The subsoil being "stonebrash" or rock, before the patches could be planted, a quantity of rock or stonebrash was dug out, and the excavation filled with earth. In consequence of the porous rocky bottom, this earth is washed in, and in part lost in the interstices of the substratum, so that the surface of many of the beds or patches is 7 in., and in some cases as much as 1½ ft., below the level of the adjoining lawn. This is a very great deformity; and, indeed, the edgings both of the walks and beds, throughout the whole place, partake of the same character of harshness. Mr. Jones, who has been head gardener to His Grace at White Knights and Blenheim since the year 1802, is as well aware of these faults as ourselves, but has not hands enough to remedy either them, or several other equally glaring defects. No expense, or, perhaps, we should rather say, no effort, has been spared to obtain not only fine plants, but also large specimens of them. There are quantities of large Magnòl*ia* conspícua, tree pæonies, purple magnolias, Pàv*ia* cárnea and rùbra, choice azaleas, kalmias, hybrid rhododendrons, wistarias, and, in short, of all the more rare and beautiful trees and shrubs procurable at the nurseries; a long straight line of tulip trees, and another long straight line of trees of Magnòl*ia* conspícua. There are many circular masses of heaths, which seem to thrive here remarkably well. *Æ*rìca stricta is now between 3 ft. and 4 ft. high, forming magnificent bushes, and covered with flowers. *Æ*rìca mediterrànea grows most vigorously, and has already attained the height of 5 ft. The same may be said of *E.* austràlis; and all the other hardy species are proportionately vigorous. Among the trees which thrive remarkably well here are, the tulip tree, Judas tree, Virgíli*a*, *Ailántus*, Nýss*a* aquática, liquidambar, sassafras, and the Balearic box, which, like the common box, is of a much more beautiful green when grown under the shade of trees than when fully exposed to the sun. There are some old trees of *Catálpa*, 30 ft. high, with heads from 30 ft. to 50 ft. in diameter, now covered with flowers. Among the other old trees, besides the oaks, are some deciduous cypresses and Lombardy poplars; but the greater part of both these latter have been cut down since we last saw the grounds in 1810. The poplars were generally considered to be the oldest and finest in England; the few which remain are decayed at the top, and cannot last many years. The deciduous cypresses are also decaying; though large, they are smaller than those at Syon. There is a Portugal laurel, the branches of which are 100 yards round at the base; those of the Portugal laurel in Eastwell Park, in Kent, are considerably larger. A green-house in a tent-like shape has been formed at one angle near the house; and a handsome rustic shed, open on all sides, and covered with shingles, has been erected in the interior of the grounds. There are various other covered seats, but none of them are good. There is a circular piece of green trelliswork, with gilt balls, which we consider the *ne plus ultra* of bad taste and absurdity. It would disgrace a cockney tea-garden; and the sooner it is swept away from the grounds at Blenheim the better. So much for the details of all that part of what is called the duke's private garden, which lies between the palace and the cascade.

We shall next say one word on the manner in which the single plants, and the small groups and masses, have been distributed over the lawn. This has not been done with much taste. They are too equally scattered over every part, so that breadth of effect in the lawn is in a great measure destroyed: they might have been sufficiently distinct to show the individual beauties of the plants, and yet, at a distance, have formed large groups and masses. We do not object to the introduction of the two straight lines of rare trees before mentioned; on the contrary, we think they afford an agreeable contrast to the prevailing character of intricacy and variety; but we do decidedly object to the spotty frittered appearance, which every one possessing a painter's eye must allow to be the result of the numerous single plants and groups introduced by the duke.

Beyond the lake, and above the cascade, is formed what is called the rock garden. It may occupy an acre, and is surrounded by a fence, rather too conspicuous, both from within and without, of rude flagstones set on end. The doors in this fence are formed of similar stones, turning on pivots, so as to turn either way, as easily as a common turnstile. We passed very hastily through this garden, but we saw it sufficiently to enable us to form a decided opinion, and to rank it with the rockwork at Syon, and that in the beautiful alpine garden of Lady Boughton, near Chester. (VII.551.)* The styles of the three rockeries are totally different, though their object is the same, viz. that of displaying to advantage alpine plants. The object of Lady Boughton is, to show a range of the summits of rocky hills; that at Syon, to display a ridge of massive blocks of stone intermingled with vegetation; and that of the Duke of Marlborough, to show rocky scars on the face of a steep bank. One great advantage which the latter has is, the possession of abundance of stone of the same kind (viz. the limestone of the locality), abounding with organic remains. There is nothing particular in the disposition of the stones in the scars; but the stairs, which pass obliquely through them from one scar to another, and thus connect different horizontal galleries, are very well managed. Each plant has a separate nidus, with appropriate soil; and the more rare sorts are numbered in a particular manner by the duke. On a wooden tally, 9 in. long and 1 in. broad, painted lead colour, there is about an inch on the upper part painted yellow: on this an upper row of black dots represents hundreds, a lower row tens, and the lowest units. Among the plants are a number of rare alpine species in general mixture; and sometimes, if we are correct in our recollection, green-house species are introduced among them. Where the rockwork is so extensive as it is here, much more effect would be produced by keeping the exotic species by themselves, for the purpose of producing a distinct succession of scenes. This principle, indeed, ought to be extended to the disposition of even the hardy alpines, which should have appeared in masses of one order in one place; but neither at White Knights, nor at Blenheim, has the duke ever shown any taste for beauty, but as displayed in objects taken singly. The stones composing the rockwork are a good deal covered with moss, which takes off from their new and raw appearance. On the whole, this rock garden, defective as it is, appeared to us the only redeeming point in the duke's gardening operations at Blenheim. The greater part of his other works we regard as injurious to the character of the place; and in this respect we agree with our elegant and enlightened correspondent "An Amateur." (See IV. 87.)

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* We have since heard that this rockery has been removed. We should have been very much gratified by a plan and view of the flower-garden and the rockery at Hoole House, but we find that it cannot be obtained. — *Cond.*

It has been said by some that the Duke of Marlborough would have made an excellent gardener: we cannot allow this, taking the word gardener in a general sense. We have seen no evidence, either at White Knights or Blenheim, of taste or skill in gardening as an art of design: we have seen a great love of rare plants, without well knowing what to do with them, and that is all. If the duke had been brought up a gardener, therefore, we do not think he would ever have risen higher than a mere cultivator; he would certainly never have been either a Kent or a Brown. A thousand reflections arise out of the circumstances connected with the present ruinous state of this princely demesne, but we repress them; only observing that the character which we heard of the Duke of Marlborough, in Woodstock and Oxford, is very different indeed from that which the Duke of Wellington bears in the neighbourhood of Strathfieldsaye.

Oxford.—*August* 13. We passed this day chiefly in looking at the colleges and other public institutions. The ancient garden of Trinity College used to be remarkable for its yew hedges, which are now overgrown, and getting naked below. Yew hedges were planted against walls in former times, because gardeners had nothing better to cover them; but they should now give way to the ornamental climbing and creeping shrubs, of which five hundred species and varieties might here be introduced and named. The narrow border in front of the wall might be stocked with numerous species and varieties of bulbs to flower in spring, and these might be succeeded by annuals for summer display. The effect would be most splendid throughout the year, and the names being added to each species might be the means of exciting a taste for plants in many of the students. In all probability, however, the yew hedges are considered as much a part of the college as the stone walls against which they are placed, and, of course, neither will be removed.

The garden of St. John's College is under the care of Mr. Fairbairn, who is introducing various improvements, and intends ultimately to have, if possible, an approximation to an arboretum, with the different species named. This is as it ought to be, and we could wish to see the same thing attempted in every college garden. What all these gardens, without any exception, might excel in, would be, climbers and creepers on their boundary walls, and mignonette in the crevices of their paved open courts, and at the bases of the walls of the gravelled courts, as Mr. Fairbairn has successfully exemplified in the gravelled court of

St. John's. The garden at St John's is considered the largest college garden in Oxford.

The walks belonging to Magdalen College are conducted through meadows on raised banks about 30 ft. broad, between ditches containing running water, about 10 ft. broad and 4 ft. deeper than the surface of the meadows. The walk along the centre of the raised bank is about 10 ft. wide, leaving 10 feet on each side to be varied by trees. Through the framework formed by the stems of these trees and the undergrowths, the meadows and country beyond are seen to great advantage; and, in advancing along, so admirably do the trees come in, that there is not a point, whichever way the eye turns, from which a perfect landscape might not be transferred to paper. This is saying as much for such a walk as can be said in a landscape point of view; the improvements which the gardener ought to make in it are, to substitute American and other choice trees and shrubs for the common sorts, and to introduce herbaceous plants, taking care that this is done in such a manner that one genus at least may prevail in one place, and not that a uniform mixture should be maintained throughout. This principle, we trust, Mr. Fairbairn will keep in view in his improvements in the college gardens, and more especially in his introduction of laurels, box, holly, yew, ivy, &c., as undergrowth, instead of elm suckers, and elders. We recommend him to study Bear Wood. (IX. 679.)

The walks in Christ Church meadow differ from those of Magdalen chiefly in having a greater breadth of turf on each side, and in being more thinly planted with trees; and they might be improved in a similar manner. For the scattered trees in the meadows of both colleges others might be substituted, and added, so as to form an arboretum. Christ Church avenue is much injured since we last saw it, by the decay of the top branches of many of the trees. The area of the quadrangle of Christ Church is a level square of turf, with a basin (possessing till lately a fountain) in the centre, and surrounded by a broad terrace walk about 3 ft. higher than the turf. The sunk area might easily be rendered a most beautiful flower-garden, like that of the Tuileries. In the private garden here are two fig trees, said to have been planted by Cardinal Wolsey, and a very old mulberry tree. The fig trees, which are against a wall, have been cut down so often, that they show no shoots older than twenty or thirty years, and, as these proceed from stools concealed by the surface soil, no stranger could discover that the trees are old: in truth, they may rather be considered as suckers from the old trees which formerly stood on the same spot. They bear every year; and, a few days ago, a plate of ripe figs from one of them was exhibited at the Oxford horticultural show. The mulberry tree is a large and venerable fragment, supported by numerous wooden posts, and bound and tied together by iron hoops and rods. The heart wood is entirely rotted out, and the circumferential wood is separated into parts, round each of which the bark is advancing in a manner which promises ultimately to give them the appearance of so many separate natural stems, as we frequently find to be the case in the very old olive plantations in Italy; for example, at Terni. In the upper part of the tree is a thriving plant of the common elder, which has this year made a shoot 5 ft. long.

The kitchen of Christ Church College is 40 ft. square and 40 ft. high, lighted from a lantern in the centre of the roof. There are three fireplaces, each 20 ft. wide; one of which, for roasting, has a grate formed of upright iron bars 4½ ft. high, forming a grating about 9 in. distant from the brickwork which forms the back of the fireplace. When roasting is to be performed, a vertical stratum of coals is filled in between the grating and the brickwork, and six tiers of spits, each between 13 ft. and 14 ft. long, and each having on it six or eight joints, or twelve or thirteen fowls, are placed on the racks, and set in motion by the smoke-jack. The dripping from the whole drops into the same dripping-pan, and every separate article is basted with the combined dripping so produced. Thus, if ducks, geese, turkeys, fowls, pork, beef, mutton, venison, veal, and lamb, were all roasting at the same time, each of these articles would be basted with the combined fat of ducks, geese, turkeys, fowls, pork, beef, mutton, venison, veal, and lamb. On expressing our surprise at this to one of the under-cooks who attended us, she informed us that she believed none of the gentlemen knew of the practice; but that the two or three tutors or poorer students who remained during vacations, and who dined sometimes on one joint roasted by itself, expressed their satisfaction at its goodness. It is not a little instructive to reflect on this fact. Here are a number of young men of the first rank and wealth in the kingdom, who affect, and indeed have a right from their station in society, to be epicures, eating what would disgust the humblest mechanic or poorest tradesman. If these frequently dine on meat roasted along with other sorts in a close oven, they are still aware of the difference in flavour between such meat and that roasted by itself in a free current of air; but these noble epicures, who would, no doubt, be shocked beyond measure at the idea of eating meat which had been roasted or baked in a baker's oven, on account of its having been exposed to the exhalations of other kinds of meat supposed to be roasting in it at the same time, are yet faring every day on what is a great deal worse both in reality and idea. There is a curious old gridiron in the kitchen at Christ Church, 5 ft. square, with iron wheels. It is said that formerly, when meat was dressed on it, a hole in the floor was filled with lighted charcoal, and, the gridiron being charged, it was wheeled over the fire, and afterwards wheeled off and on as it became requisite. The larders, and all the other subordinate arrangements of this kitchen, are of a very clumsy and imperfect description, badly lighted and ventilated, and altogether unfavourable to cleanliness. Properly ventilated roasting-ovens would not only roast every kind of meat with its proper flavour, as well as it is done before an open fire in a private gentleman's house, but they would save a great deal of fuel and labour. Let Mr. Sylvester, or some such engineer, be consulted, and we will venture to say that modern innovations on long-established forms will be adopted in the utensils and the arrangements of college cookery, whatever others suggested for the gardens and grounds may be rejected.

August 14. We this day looked at the different Oxford nurseries. In 1804, there were only two gardens of this description; that of Mr. Tegg, and that of Mr. Penson. There are now four others. Still the taste at Oxford is more for the sensual, than for the intellectual part of gardening. The principal products of all these nurseries are culinary vegetables and fruits; and the next, showy and fragrant flowers. What the gentlemen of the colleges desire most, is what the preacher Huntington says was preferred by the cookmaid at the place where he was gardener, viz. "a flower in a pot, and one that would stand." A geranium, a rose, a night-smelling stock, and mignonette, we were informed, would sell, but not any of the new calceolarias or fuchsias, because in the rooms of the colleges they would not "stand." Forced fruits, such as strawberries and cucumbers, pay remarkably well.

Tegg's Paradise Nursery has been in his family upwards of a century. When we first saw it, in 1804, it contained scarcely any thing more than a common market-garden, but it possesses now many of the rarer and more expensive plants; decidedly the most valuable nursery collection at Oxford. Among the camellias are C. reticulàta, C. japónica fimbriàta, and all the best varieties of Mr. Press. Almost all the new shrubs which have been recommended in this Magazine are to be found here; a number of them we certainly did not expect to see. We cannot say much for the manner in which they are propagated or cultivated, speaking comparatively with the London nurseries; and, as to order and neatness, Mr. Tegg sets them at defiance. The truth is, the ground is his own, and he is too independent to care about making the most of it. In one respect, it put us in mind of the Monkwood Nursery, where, as its owner, Mr. Smith, informed us (VIII. 113.), he allowed the rarest plants and commonest weeds to grow up together "in a friendly manner." Mr. Tegg has been very successful in propagating a number of hardy things; among other shrubs, *Dáphne póntica* from cuttings as stocks for the rarer species, and variegated hollies from cuttings.

Penson's Nursery adjoins the Botanic Garden; but he has other grounds, of greater extent, along the London road. Mr. Penson, senior, is 92 years of age, and in vigorous health. The articles produced are chiefly fruits and showy flowers. There are apple trees here, on a wet bottom, of small size, of the burr-knot kind, and upwards of 80 years of age, which bear well every year, producing very little wood, and abundance of fruit; and a black cluster grape, above 100 years of age, the roots of which have also got down to the wet bottom, which produces scarcely any fruit. Some parts of this nursery were passably clean; but a part of it, facing the main street of Oxford, on the outside of the Botanic Garden, though neatly laid out in flower-beds, was, in respect to cleanliness, far below the economic point. Mr. Tegg's nursery is in an obscure part of the town, and its disorderly state chiefly concerns himself; but Mr. Penson's nursery forms the very eye of the city when entering it from London; and, as a point of honour, he ought to keep it in the very highest order.

Bates's Nursery is about two miles from Oxford, on the Banbury road, and ranks, we believe, in point of age, the next to Penson's. Mr. Bates chiefly grows florists' flowers, and the commoner forest trees and shrubs; he also grows culinary vegetables. He has 13 acres thus stocked; and, in point of cleanliness, his ground is superior to the two preceding nurseries. He seems to have raised some good seedling georginas, in flowering which he is much annoyed by earwigs, which eat the flower while in the bud, and he is in consequence obliged to enclose some of the buds in small calico bags, kept distended by a ring of fine wire inside. The opening of the flower is retarded by these bags; and, in very hot weather, this may be an advantage, as, by opening slower, it may possibly open better. Mr. Bates endeavours, like other gardeners, to catch the earwigs in hollow tubes, formed of tubular flower stems of rhubarb and other plants, and in small pots of hay and moss turned down on the tops of the props.

Fairbairn's Nursery is close to the garden of St. John's. It is of very limited extent, but contains several forcing-houses and pits, and a number of good things. Mr. Fairbairn's great object in this nursery is to force strawberries, cucumbers, and flowers; finding that, at Oxford, these pay better than any thing else. One of his forcing-houses is heated by a smoke-flue from one of Witty's stoves, which has been improved in construction by Mr. Edwards, ironmonger, of Oxford. Mr. Fairbairn has another garden, chiefly for growing fruits and culinary vegetables, which, being at some distance, we did not go to see. The pits, in which he grows cucumbers all the winter, were heated by hot water. The pipes are conducted along the bottom of the pit; over these are placed narrow one-inch boards, about an inch apart, and over these a layer of turves. On these turves is placed a bed of mould, 18 in. thick, in which the plants are grown. We do not altogether approve of this plan, which, under a careless gardener, must be liable to some of the principal objections to a common hot-bed, viz., that of over-heating the roots, and that of having no power to produce a dry atmosphere. One pipe under the bed, and one over it at the front, would, we think, have been better.

Humphrys's Nursery is on the Banbury road; and we are much mistaken if it will not be in time the first of the Oxford nurseries. Mr. Humphrys has only been here a year or two; and he has had every thing to contend with, the ground, before he got it, having been just enclosed from a common. He told us that he was one of the first who assisted in establishing the Clapton Nursery Library in 1826; and he was also the first who proposed the establishment of a garden library for the use of the Oxford gardeners, which has ended in a gardening and natural history society and library, extensively supported by the gentlemen of the colleges and of the surrounding country. Mr. Humphrys has already built a dwelling-house and some forcing-houses. He brought with him here an excellent collection of tulips, which he grows in a bed under an awning like that of Mr. Groom. He has also raised several seedling georginas of a superior description, and grows a number of the finer annual flowers for seed. For this last department of gardening, the soil of Mr. Humphrys's nursery is particularly suitable. Eschschóltz*ia*, which scarcely ripens its seed at all about London, ripens it well here. Indeed, we have no doubt that the growing of flower-seeds might be carried to a very considerable extent in this neighbourhood, on account of the shallow calcareous soil and dry rocky subsoil. Mr. Humphrys's ground is admirably situated; and, as he appears a most industrious as well as most intelligent man, we have no doubt of his meeting with the success he deserves. His grounds were in good order and keeping.

Jeffery's Nursery is quite new, and chiefly cropped with culinary vegetables. Part of it is laid out, however, with considerable taste, and is devoted to flowers and shrubs; among which were some valuable new sorts. We have no doubt it will be a good nursery in a few years. We noticed here a plant of Calliópsis bícolor, with the dark-coloured part of the petals extending to the very tips, which alone were yellow. Seeds should be saved from this individual; but we saw no one in the nursery whom we could recommend to do this. The grounds were in good order, and surrounded by a dead hedge of thorns, very ingeniously constructed. This nursery, and that of Mr. Humphrys, were in better order and keeping than any of the other Oxford nurseries.

The Botanic Garden at Oxford is a venerable establishment. It is entered by a noble stone archway, through which is seen a vista to the other extremity of the garden. The two principal hot-houses have elevations of stone, massive and grand in an architectural point of view, but scarcely suitable for preserving plants, much less for growing them. There are two other hot-houses with very steep roofs, adjusted to the angle recommended by Boerhaave as admitting the greatest number of the sun's rays during the winter solstice. The walls of the garden appear to be about 2 ft. thick, and 12 ft. high, with a coved Gothic cornice on each side, under an elevated Gothic coping. The whole wall is composed of large blocks of smoothly dressed stone, and forms the noblest garden wall, speaking architecturally, which we have seen in any country. Comparing this botanic garden with all the others in Britain, it as far surpasses them in an architectural point of view, as it is inferior to the best of them in botanical riches. When we first saw it, in 1804, it was a very poor and apparently neglected garden, hardly worthy of being called botanical; but since it has been put under the direction of Mr. Baxter, the present curator, it has been in all respects wonderfully improved: the number of species, as it appeared to us, has been more than tripled; and the whole is in far better order and keeping. Mr. Baxter has also raised the entire surface of the garden 10 in., and has brought into culture a space outside, the surface of which he has also raised. All this he has effected without any extra-assistance, in the course of a great number of years, doing a little during the winter of each. It is, indeed, altogether extraordinary that Mr. Baxter has been able to accomplish this, since he has not half the number of men requisite for keeping such a garden in proper order. In proper order, indeed, it is impossible that it can be kept; we merely say that it is wonderful that it should be so good as it is. In showing us round, Mr. Baxter pointed out some box and yew hedges 9 ft. broad, which must be as old as the garden itself. The branches of yew are, in many places, grown together by a sort of natural inarching. These hedges are of no use whatever; and are injurious by occupying space, and affording a harbour to slugs, mice, birds, and other vermin. The cistern for aquatics is a parallelogram trough of boards, lined with copper, about 2 ft. wide, divided into squares of one foot each, so that each plant is kept perfectly distinct. The upper surface is about 3 ft. from the ground, so that all the plants are near the eye. In this aquarium the plant which was the most rare to us was the Cáltha nàtans. The stages for alpines are built solid of brick; each step is 9 in. wide, and the thickness of a brick higher than the one below it. The pots are thus kept cool, the worms are prevented from entering them, and the plants are presented advantageously to the eye. There is a considerable collection of willows, and a surprising number of new plants, considering that none are purchased, and that there is but little to exchange with other botanic gardens for them. Some of the newest articles have been contributed by our good friend, Mr. Cameron of the Birmingham Garden. Near the entrance gate is what is believed to be the oldest and largest Christ's thorn (*P*aliùrus aculeàtus) in England: it is about 20 ft. high, and would extend wider were it not surrounded by other plants. It is now beautifully in bloom, a circumstance which adds greatly to its value as an ornamental shrub, there being very few of these which flower in August. There is an *A*ristolòchia here, the leaves of which always produce a portion of green leaf on the under side, slightly attached in the middle, and showing a surface like that of the upper side. Whether this is a disease, or a peculiarity of growth, Mr. Baxter has been unable to ascertain. There are numerous fine plants of *Yúcca* gloriòsa in one part of the garden; and Mr. Baxter finds that suckers of this species require 12 years' growth before they come into flower, and that afterwards they flower every 4 or 5 years. He had five yuccas in flower at once, a year or two ago, some of them having flower stems 15 ft. high. The two principal compartments of the garden are devoted to herbaceous plants; the one to British and the other to European and American species: the arrangement in both cases is Linnæan. So badly are the flues in the hot-houses constructed, that Mr. Baxter informed us it required a whole afternoon's attendance to the fire to generate any sensible heat. In the central green-house there is no flue at all, but a small iron stove against the back wall behind the stage; and, what will amuse gardeners who have not seen the contrivances of the same kind on the Continent, there is a small iron four-wheeled waggon, which, in severe weather, is filled with burning charcoal, and drawn backwards and forwards along the front path by the gardener. There can be little doubt but that Bobart, who was a German, and the first gardener here, imported this waggon from his own country. In the library and museum, Mr. Baxter pointed out to us the herbariums of Gerarde, Dillenius, Morrison, and other old and eminent botanists; the first two volumes of Rudbeck's *Campi Elysii*, folio, full of wood engravings of plants of all countries, very scarce; this being the only copy of the first volume in England. There are only three copies of this volume, and six of the second, in the world: all the rest, with the whole of the copies of the remaining ten volumes of the work, were destroyed by fire; and grief for their loss is supposed to have occasioned Rudbeck's death. Every young gardener knows the genus Rudbéck*ia*, named after this eminent, but unfortunate, botanist: he will now have some interesting ideas, which he can associate with the name when he sees the plant. It is much to be desired that a Biographical Dictionary of eminent Botanists and Naturalists were published, from which gardeners and others might draw a few ideas to associate with the commemorative names of plants. We made an attempt at this, in the first pages of our notes to the *Encyclopædia of Plants*; but, finding that we could not do it satisfactorily, for want of proper data, we gave it up. It would require a German botanist to undertake such a herculean task.

Besides the relics before-mentioned, we saw the original drawings for a work on fungi by Dillenius, as well as the dried specimens from which he drew and engraved, with his own hands, the plates for his work on mosses. Passing over many other interesting articles, we shall conclude by stating that we saw a number of the original drawings made from nature, by three artists, for Mr. Baxter's excellent work, *British Phænogamous Botany*. We were happy to learn, from different sources, as well as from Mr. Baxter himself, that this work is exceedingly well received, as, indeed, it ought to be. We are persuaded that, when the nature of the work is known, and that it will be completed in about six volumes, there will not be a scientific young gardener, or any young man or woman whatever, desirous of forming an acquaintance with British plants, who will not become possessed of it. Some persons that we have met with about London confound Mr. Baxter's *British PhænogamousBotany* with Mr. Sowerby's *English Botany*; but the important difference between them is, that the latter contains all the species, and the former only one species of a genus. The *English Botany* will consequently be much more extensive than the *British Phænogamous Botany*; which last will not cost more, uncoloured, than 3*l.* As there are but a few genera of British plants, of which it can be desirable for a gardener, or, indeed, any person who is not a scientific botanist, to know all the species, we certainly think Mr. Baxter's work perfectly sufficient for every practical man. Whoever knows the characters of a genus, and has seen the typical species, can, generally speaking, easily make out from botanical descriptions, or even short specific characters, any of the species. Those who want to do more than know the principal species, and at the same time to save themselves the trouble of discovering species from descriptions, may have recourse to Mr. Sowerby's excellent work, in which the whole of them are figured, and may be recognised at a glance. For our own part, we think that gardeners and most other persons should endeavour to become acquainted with the genera and the principal species only; for a great deal of valuable time may be as good as lost by a young gardener, in acquiring a knowledge, or rather in recollecting the names, of obscure plants, which might be more profitably employed in acquiring a general knowledge of other branches of natural history, and chemistry. The *beau idéal* which a young gardener ought to aim at is, a general knowledge of every thing; and a power of directing the whole of his attention and faculties to any one subject, so as to make himself master of it, if requisite.

The last thing which Mr. Baxter showed us was his own study, or library; and certainly it is by far the most complete one which we have ever seen in the possession of any British botanic gardener. That which approaches the nearest to it is the library of Mr. Shepherd, at Liverpool; but Mr. Baxter's is twice as rich. It contains all the works on British botany, De Candolle's principal works, Sprengel's, Roemer and Schultz's, &c. Mr. Baxter showed us some leaves of dried specimens prepared for the work on mosses, of which he published three numbers some years ago; but, as Dr. Hooker informs us (*English Flora*, vol. v. p. 130.), "the work was never completed, *Mr. Baxter having died* after the third number." We are happy to inform Dr. Hooker and his readers that it was the work only that died, and not the author; for Mr. Baxter now is, as we hope he may long continue to be, in excellent health and spirits. With all Mr. Baxter's knowledge, he is one of the most modest and unassuming of men.

It is much to be regretted that the city of Oxford has not a botanic garden suited to the rank which it holds as a British university. Were a small sum contributed by each of the colleges yearly, even the present garden might be rendered doubly efficient: more especially if the adjoining ground, at present occupied by Mr. Penson, were added to it, and a part or the whole of the meadows of Christ Church. But the situation is altogether bad; and, for a botanic garden worthy of Oxford, a dry, open, ample, airy piece of ground should be selected, outside of the town; say somewhere about Jeffery's Nursery. The present botanic garden might still be continued as such, on a smaller scale, so as to suit the income destined for its support. Till lately there has been a great want of botanical taste among the Oxford professors; but we hope that a taste for botany, as well as a taste for geology, is now dawning upon them; and, whenever it does, they will soon produce a botanic garden worthy of themselves. We are sure that the stocking of the different college gardens with new and ornamental articles, and naming them in the manner contemplated by Mr. Fairbairn, will contribute much to this effect. After a botanic garden is established, a zoological garden will follow; and, perhaps, ultimately, a public ornamental garden surrounding the whole city, as a breathing zone. (See V. 686.)

The two principal ironmongers in Oxford are Ploughman and Edwards; the former has an economical modification of Methley's fireplace (V. 238., and *Encyclopædia of Cottage Architecture*, § 2061. fig. 1843.), which deserves general adoption. The fuel chamber is narrowed at the bottom, by the back and sides being beveled inwards; and the price is greatly reduced, by the front bars and the grate being of cast iron unpolished, and plain beads being substituted for enriched mouldings. This fireplace may be seen in some of the parlours of the Golden Cross Commercial Inn, Oxford. Mr. Edwards manufactures, besides the improved form of Witty's furnace mentioned in p. 108., an excellent light and strong hand-glass of tinned iron; a barrow engine, the frame of which is wholly of iron; an excellent tin roaster; and an oval tin hip-bath, which may also be used as a child's bath, foot-bath, sponging-pan, or washing-tub. We have sketches of these articles, which we may probably give in our *Architectural Magazine.* Mr. Edwards has applied one of his improved Witty's furnaces to a baker's oven in Oxford, which we examined, and to some bakers' ovens on a large scale in London, which we intend to see. The advantage is, a great saving of fuel, by the consumption of the smoke; and of labour, by avoiding the trouble of cleaning out the soot every time the oven is used. He has also applied these furnaces to the boilers of breweries and of wash-houses.

The road to Wantage is through a hilly country, badly cultivated; and it is everywhere in want of having the surface soil deepened by such an instrument as Finlayson's harrow or as Wilkie's grubber; but it will require another and a reading generation of farmers to introduce these implements. We passed only one or two gentlemen's seats, but we observed a number of well-kept cottage gardens, richly ornamented with China roses, hollyhocks, and many of them with georginas. The splendour of the roses on one cottage, in a remote situation, exceeded anything of the kind between it and London: the trees were at least 20 ft. high, and were covered with a mass of bloom. We lately saw a lady to whom the present Mr. Lee's grandfather, about forty years ago, showed the first China rose which he had to propagate from, as a great curiosity. In some of these gardens were K*é*rr*ia* japónica and *Aúcuba* japónica, both green-house plants thirty years ago.

Wantage is a small dull town, but still there are some neat little gardens about it. The country continues hilly, and badly cultivated, till within a few miles of Newbury.

Benham House, Keppel Craven, Esq.—August 14. The grounds are limited; but, from the proximity of the woody scenery of

Hampstead Park, to a stranger they appear boundless. There is a fine piece of water in the bottom, and the lawns are very well varied with trees; but, the owner having resided many years abroad, the house has been long unoccupied, and the grounds are in a state of neglect. We examined the kitchen-garden, in which the mode of heating hot-houses by hot water was first displayed by Mr. Bacon, when he rented Benham House; but the hot-houses are now pulled down, and the garden let out to a market-gardener.

Hampstead Park, formerly Hampstead Marshal, Earl of Craven, adjoins, as we have just observed, Benham Park, and, in the language of landscape-gardening, appropriates the whole of its scenery. The most remarkable part of this park is an elevated situation, where, on a piece of table land, a magnificent palace was commenced by William Earl of Craven, in 1662. The legend of the place is, that this palace was erected by the first Earl of Craven (well known for his gallantry in the wars under Gustavus King of Sweden) for the daughter of James VI., the widowed Queen of Bohemia, to whom, it is said, he was privately married. This earl inherited great wealth from his father, who was a citizen of London. It was for this same queen that the magnificent gardens of Heidelberg were planned, and partly executed, by Solomon Caus, one of the most celebrated architects and engineers of his time. In his published plans of the Heidelberg gardens (*Hortus Palatinus Heidelbergæ, &c.*, 1620) is a design for an orangery, with the idea thrown out of heating it by steam. In all probability, this orangery was the largest then in Germany. It is a remarkable circumstance, that, though these two magnificent places were formed for the Queen of Bohemia, she never enjoyed either of them. She was driven from Heidelberg, by her first husband's defeat at Prague, before the gardens there were finished; and she died the very year after the palace of Hampstead Marshal was commenced. The Earl of Craven never married again, and, after his death, his titles and estates went to a distant relation.

The architect of the palace at Hampstead Marshal was Sir Balthazar Gerbier, who died in 1667, and is buried in a small church adjoining the site of the palace; where, also, was buried Gideon Hickson, "who was smith and farrier to the abovesaid noble earl, and who died in the year 1677." This palace was burned down in 1718; but the grand piers for the gates of the garden scenery, amounting to 12, each about 20 ft. high, and superbly decorated with sculpture, still remain; as does the kitchen-garden, with an elevated terrace forming one side of it. We were informed by Mr. Dawkins, the gardener here, that a London architect has recently proposed to remove these piers to Coombe Abbey, the earl's seat, near Coventry. We hope no such sacrilege will be perpetrated. We would rather recommend recourse being had to the original plans for the palace and its accompaniments; and, as the site is elevated, and commands extensive prospects on at least three sides, we would realise all the accompaniments, such as terraces and gardens, and build walls representing the general outline of the house. We would raise these walls to the intended height of the basement floor, and on this level platform, we would form a flower-garden, or even a plain area of smooth turf, from which the views of the surrounding country might be enjoyed. We would even go a step farther, and carry up the walls so as to terminate them a few feet higher than the platform, irregularly, distinctly indicating the openings for the windows, &c., and varying the whole with vegetation, so as to make it appear like a ruin. The situation is well adapted for a magnificent house, from its dry gravelly soil, as well as from its elevated surface; and we only wonder that any one should reside, even for a month or two, in such a low, dull, damp situation as Coombe Abbey, who had an opportunity of building here. The kitchen-garden intended for the palace contains seven acres, and the walks, which are of turf, were originally of such a width as to admit of a carriage driving all round and through the garden. The kitchen-garden in those days, it must be recollected, formed a part of the pleasure-ground, and, in correspondence with this idea, the terrace above mentioned is on that side of it which is opposite to the house. This magnificent terrace is now used as a rabbit warren. The walls of the kitchen-garden are most substantial, being built of sound brick, and well protected with stone copings. Against one of them the original fig trees still continue to bear excellent crops. There is a commodious gardener's house, with large lofty rooms; and some new hot-houses have been commenced. One of these, a peach-house, is heated by steam, by Messrs. Bailey of Holborn, the iron pipes being cast so as to imitate cables, in allusion to the late earl's fondness for maritime pursuits. The present residence of Hampstead Park is more than half a mile from this ancient garden, on a declivity in the lower part of the grounds. It is very pleasingly situated, and, though it was originally nothing more than a keeper's lodge, it is now enlarged, and has been rendered fit for the residence of a wealthy family. As both the additions to the house and to the grounds have been made by degrees, and without any previously concerted plan, with a view to unity of system and effect, it is not to be expected that much instruction can be derived from studying the general arrangement of this residence; but there is a great deal of variety in the details, and nothing can exceed the excellence of the culture of the flowers and shrubs.

There are several separate flower-gardens, each laid out with taste, and planted with the choicest species and varieties.

Two of these flower-gardens have the beds surrounded by edgings of box, with gravel walks between, and open trelliswork summer-houses in the centre; and another has the beds on turf, and contains an octagon tea-room, very tastefully designed, and neatly finished and furnished. Under a wide-spreading common sycamore, of which there are many fine specimens at this place, projecting from a steep bank, there is a level semicircular platform bounded by a parapet wall, the coping to which is formed by a groove 6 in. wide and deep, on the top of the wall, filled with soil, and planted with sedums, saxifrages, and other rock and wall plants. The view over this parapet is to a wild wooded glen, with a rising bank of natural wood beyond; altogether a romantic scene. There are several green-houses, rather too green for our taste, because the woodwork is painted of that colour; but the plants within are excellently grown, as are those in a small hot-house. There is a wall for acclimatising tender plants, and for showy roses and climbers, on which, among other fine things frequently before named, are Billardièr*a* longiflòra, which is found perfectly hardy, and is now covered with its beautiful purple fruit. On the lawn in front of the house are numerous beds, rustic boxes, and several architectural ornaments, such as vases, &c.: but the latter, being placed on the turf, without any mural connection with the house, or any conspicuous architectural basement, are decidedly objectionable. Another garden contains a rustic arcade covered with creepers, which is very fine; and, in short, throughout the place there may be seen almost all the usual garden ornaments of the rustic and trellis kind. There is a boundary fence of woodwork, sawn and turned by machinery impelled by a water wheel; and so great are the economy and expedition produced by the employment of this power, that five men saw, plane, turn, and put together, in one day, nine panels of fence, each 9 ft. long, and 9½ ft. high. There are numerous hybrid rhododendrons and azaleas, the types of most of which have been originated by Mr. Gowen, in the gardens at Highclere, and a variety of other articles and contrivances, of ingenuity and interest, all of which are admirably managed by the gardener, Mr. Dawkins.

From the garden scenery on the declivity we went down to the Vale of Kennet, in which, on the centre of a broad expanse of the river, where the water is 14 ft. deep, is an octagon bathing hut surrounded by a rustic veranda. This is connected with both banks of the river by wooden bridges, from the ends of which proceed gravel walks for fishing from. These lead to a fishing house, and to stews, in which we were shown some remarkably large trout, pike, and numerous eels; and chub, which is only used here for feeding the other fish, though it is sometimes sold in London for carp, which it greatly resembles. The scales of this fish were sold, a few years ago, to the London jewellers for 10*s.* 6*d.* a pint. We also saw here, for the first time in England, the crawfish, of which we had seen, in 1813, great numbers in the moist meadows on the Vistula at Warsaw and Cracow. They are here in little esteem, and are seldom used, though they are there considered as delicate as shrimps, and are thought to make one of the best of soups. We were surprised to find that, though the trout and the pike may be fed advantageously in stews, eels cannot. The manner in which the fish are caught at the weirs here is very simple and ingenious. Below the sluices is placed an iron grating the whole breadth of the stream, and rising nearly to the height of the water in the dam. Beyond the rise it declines into a gutter, which leads to a tank or box at the side. The large fish which are let out by the sluices are thrown over into this gutter, which is also grated, so as to prevent their escaping otherwise than down a slope on one side to the box or chest. In this way as many fish are caught as are wanted, and no more, especially eels.

The Kennet is one of those rivers that exhibit the phenomenon of ice forming in the bottom, and we were informed here by the Earl of Craven's fisherman, that, in severe winters, the ice forms with such rapidity in those parts of the river that are shallow, and where, of course, the stream is rapid, that, in one night, a complete dam has been formed across the stream, of such a height as to throw the water over the adjoining banks. The water thus thrown over also freezes, and the consequence would be, a complete inundation of the valley above, if the fishermen did not take effectual means to break up this dam. It is observed that, when the bottom of the river is frozen, one good effect is the result, and this is, that, when it thaws, the pieces of ice, which float up from the bottom, bring all the weeds with them; thus thoroughly cleaning the river. Observing a circular pond of stagnant water close by the margin of the Kennet, we asked the fisherman whether he had observed what took place in this pond when the river froze at the bottom. He perfectly understood the question, and answered that this pond, and all other stagnant water, froze at top. Some years ago, Mr. T. A. Knight made an attempt to explain the cause of running water freezing first at the bottom, in the *Transactions of the Royal Society*; and the same interesting subject has been discussed by various correspondents in our *Mag. Nat. Hist.*, v. 91. 303. 395. 770.; but the phenomenon has only lately been explained satisfactorily in Jameson's *Philosophical Journal.* It is there shown that it proceeds from the motion of the water, mixing the frozen laminæ at top with the water below, till the whole mass becomes cooled down to the freezing point, when crystallisation takes place, beginning at the bottom and sides, as it does in the case of crystallisation of salts. Every gardener may prove the truth of this theory, if he will take the trouble of keeping the water of a small pond in motion, by stirring it while freezing. Possibly, if thorns were dragged through the water of canals full of weeds, by men on the banks of both sides, during the frosts of winter, when labour is cheap, the weeds, when a thaw should take place, might be separated from the soil at the bottom of the pond or canal more cheaply and effectually than they could by mowing. This might be tried on a small scale.

(*To be continued.*)

ART. II. *Remarks on the State of Gardening in the Neighbourhood of Ramsgate.* By CALYCANTHUS.

Sir,

ALLOW me to submit, for the perusal of your distant correspondents, a few casual observations on the state of gardening in this neighbourhood.

The natural formation of the country is not favourable for any display of the picturesque. Almost the whole of it is arable, and in a very high state of cultivation; indeed, there is but one park, properly so called, in the Isle of Thanet, and that is

Quex, the Seat of J. P. Powell, Esq.—There is no particular beauty in any part of this park; and the house is singularly ill placed. I believe there is no sea view, even from the roof. Mr. Powell is an amateur in the science of bell-ringing, and has erected several fantastic and grotesque belfries in different parts of his grounds: one of them forms a prominent landmark to vessels off the coast.

Piermont House, at Broadstairs, known to gardeners as Forsyth's Villa, formerly a celebrated place for plants, is and has long been sadly neglected; and there is not much, in any part of the outline, to redeem the present state of the details of its pleasure-ground. The mansion stands high, and too much exposed; but the view from it is pleasing.

There are several villas in the neighbourhood, of which East Cliff Lodge, M. Montefiore, Esq.; Ellington, Major Garratt; and Hartsdown, —— Taddy, Esq., are, I think, the most considerable. There are no striking features in any of these, farther than the natural beauties of sea, land, and trees combined; the last very sparingly. At East Cliff there has been considerable expense incurred in the erection of towers, turreted walls, &c., of flint. The effect is curious, but petty and trifling.

The Farmers of the Isle of Thanet are, in general, a well educated and rather superior class. Their gardens are well supplied with showy flowers, and, in many cases, laid out with considerable taste. Many of the farm houses and buildings are of flint; and this material gives a picturesque and pleasing effect to simple forms.

As I write merely for the benefit of my brother-gardeners, I shall not refer to the numerous published descriptions of the Isle of Thanet farther than to observe that they either omit, or give a very slight notice of, the village of Dumpton, between Broadstairs and Ramsgate, and by far the most woody and rural spot in the isle, generally so bare of trees.

The Villa of R. Croft, Esq., presents no particular feature of beauty, and is suffering much from neglect; but near it is one of the prettiest farm houses I have ever seen. It is a genteel and commodious building, with stuccoed front and cottage roof, projecting considerably. A dell, formerly a chalk pit, is in front of the house, and produces an excellent effect of shadow under two fine specimens of the ash and walnut; and very agreeably deceives the eye as to the extent of ground.

As to Nurseries, there are none which can interest the scientific gardener or botanist. Fraser's, at Ramsgate, contains a fair assortment of common and showy plants, and the usual kinds of fruit and other trees. Mr. Fraser himself is a man who deserves to be placed in a more favourable situation: he has travelled much; his manners are pleasing, and his attainments considerable; but there is no demand or custom in the neighbourhood for anything out of the common way; and necessity compels him to devote his attention to the growth of that which will remunerate him.

The Growth of Ivy here is, I think, superior to what I have ever seen elsewhere, both in rapidity and vigour. The soil, being for the most part a very thin layer of loam on a substratum of chalk, is admirably adapted for all evergreens. Of trees, the walnut, the ash, common elm, and wych elm, especially the latter, attain the highest perfection. To sum up the whole, this is the land of agriculture, not of horticulture.

I am, Sir, yours, &c.

Ramsgate, Oct. 3. 1833. CALYCANTHUS.

ART. III. *Notices of some Country Seats in the North-Eastern Counties of England.* By G. W.

Sir,

IN your tour through England, in 1831, you did not visit the north-eastern counties, where there are some very splendid seats. I have, therefore, resolved to send you a short description of some of the most magnificent of them, thinking that they may not be uninteresting to some of your readers.

Lambton Castle, the seat of the Earl of Durham, an elegant Gothic edifice by Bonomi, is situated on a sloping bank close to the river Wear, six miles from the flourishing town of Sunderland. The principal drive emerges from the great turnpike road between Durham and Newcastle, and passes over three miles of a well-wooded park. The other approach leaves the Sunderland road close to a bridge where the road to the town of Chester le Street crosses the Wear. This, although the shorter drive, is by far the more picturesque one; as it winds over a lofty surface. The river, before arriving at the castle, is crossed by a splendid stone bridge of one arch; the four corners being surmounted with the figures of four lambs cut out of solid stone. After leaving this bridge, the road winds up a valley, over which there is an elegant chain bridge which connects the pleasure-grounds. The principal view is from the south side of the castle. A spacious terrace extends the whole length, from which, casting the eye over the machicollated wall (which is 20 ft. above and 20 ft. under ground) to the deep expanse below, the lambs may be seen sporting close to the banks of the river with the tide flowing past, and the banks on the opposite side rising to a stupendous height, well clothed with old timber, and backed with an extensive deer park. Artificial borders for hardy and half-hardy shrubs and climbing plants occupy a considerable space along the south front, and are seen with fine effect from the terrace.

The pleasure-grounds extend almost a mile to the west, through the middle of a wood that overhangs the river. There is a flower-garden, with a conservatory and banqueting-room; and, at a small distance from this, a piece of enclosed ground, occupied with pits and frames for the propagation and preservation of plants. The whole of the grounds, which are kept in excellent order, are under the management of Mr. Younger, an able and experienced florist from London.

The kitchen-garden is half a mile to the east of the castle, and is approached by various walks leading through coppice woods appropriated chiefly to the preservation of game. The garden comprises eight acres; four of which are enclosed in the form of a square, on a declivity close to the river. The hot-houses stand upon a terrace fifteen yards wide, and occupy the whole extent of the north wall. In the centre is a superb green-house with pine stoves, vineries, and peach and fig houses at each end, making a range of 500 ft., besides a range of pits and frames in a slip on the east. From the terrace walk, in front of the hot-houses, the view over the garden is superb. In the middle of the garden is a reservoir, encircled with rockwork, interspersed with a profuse collection of plants. A portion of the east and south borders is sometimes inundated, being contiguous to the river; and is often, from its low situation, subject to injury from spring frosts. The garden was laid out fifteen years ago on the most improved plan; and every department was finished in the most magnificent style. The house for the principal gardener, Mr. Rule, is built on an eminence near the garden, and is the largest, best finished, and most commodious gardener's house in the north of England. The pleasure-ground that surrounds this house accords well with the building. Some of your juvenile correspondents of late have complained of the want of proper accommodation for the gardeners' assistants, which at most places is neglected. Here, however, the case is different; for there are two very commodious well-furnished rooms for four young gardeners, who superintend the forcing-houses, &c. In all its various departments this garden is well managed; and it is particularly remarkable for excellent grapes and peaches. Before concluding, I may mention that the castle and all the adjoining buildings are lighted with gas, supplied from works erected solely for that purpose.

I am, Sir, yours, &c.

Staffordshire, Oct. 14. 1833. G. W.

(*To be continued.*)

ART. IV. *On the Advantages which Gardeners may derive from inspecting the Gardens of others; and on the Destruction of different Insects.* By R. T.

Sir,

I THINK it is very much for the benefit both of ourselves and others, when we can take a peep at the grounds of our brethren, and, having made our observations, embrace the most favourable opportunity of exposing what we see amiss, in hopes that, when we call again, we may find an alteration. Now, Sir, as I know of no better plan for doing this effectually, and without giving offence to individuals, than publishing it in your Magazine, perhaps you will allow me to state a few objectionable things which, I doubt not, many others have often observed as well as myself, and which are all easily to be remedied. Having the good fortune to serve a gentleman who keeps a horse for my accommodation, I have frequent opportunities both of improving myself, and also of detecting the errors of others.

At one place where I called, I was no sooner shown into a vinery, than the noise of wasps was so great, that one would have almost imagined a swarm of bees had taken possession of the house. I could not help expressing my surprise; and, having asked my conductor why they did not employ people to destroy their nests, I was told that they did; but that they did not find many. I then enquired what they were paid for each nest, and he told me three-pence. This at once accounted for what I had seen and heard. If gentlemen wish their labourers to toil all their dinner time, and all their leisure hours in the evening, nay, perhaps half the night, in search of nests, and yet not to destroy above half a dozen, and to receive no higher a reward than three-pence each, it is no wonder that very few are found. One shilling each is the lowest that ought ever to be given for a wasps' nest. But the best method to insure their destruction is to pay sixpence each for every queen wasp that can be caught in the spring, when the wasps are collecting materials with which to build their nests. This not only reduces the price by one half (as every queen has a nest), but it also destroys the wasps before they have done any mischief: whereas, by only paying for the nests, the men will often be tempted to let the queens escape. Besides, the nest may, perhaps, have acquired the size of a peck measure before it is found, and several thousands of wasps from it may have been destroying the fruit for months. So effectually have I known wasps destroyed by killing the queens early in the season, that, where it has been done, there has not been a single nest near the premises, while other people have had them in abundance.

I beg now to call your attention to another of the common enemies of gardens, I mean the earthworms, which are often so numerous in bark beds, that they get into the pots, and do great injury to the pines and other plants plunged therein; and, although they are to be kept down without using what I am about to recommend, yet, as there are so many who seem not to know an effectual means of destroying them, it may not be amiss to inform such how it may be accomplished without danger or difficulty. After turning the tan in the usual manner, take some common salt, say about a quarter of a pound to a light; let it be dry and broken fine; throw about half of it on the bed as regularly as you can; fork the surface over about the depth of the pots; then throw on the other half, and plunge the pots as usual. This will destroy all the worms it touches, and will prevent others from coming up from the bottom of the bed; and the quantity of salt used will not injure the plants, even if the roots get out of the pots.

Worms and stagnant water are also great enemies to plants in large pots, especially when standing on the borders in greenhouses during the winter, or on the ground out of doors in summer. A correspondent has recommended tubs for orange trees standing hollow from the ground, on this account; but where these are not used, take a piece of slate the size of the bottom of the pot, and place it where the pot is to stand; then take three small stones, or any thing else, and place them between it and the pot: this will permit the water to drain away, and prevent the worms from getting in.

Worms and slugs are also very destructive to crops of potatoes, especially if it happens to be a wet season for planting; and many persons suppose that the bad crop is owing to the wet having rotted the sets, when, upon examination, it has been found that they have been destroyed by worms and slugs. To prevent this, as soon as the potatoes are cut, spread the sets thinly on the ground, and throw a small quantity of quicklime over them; then turn them up together, when the moisture of the potatoes will cause the lime to slake, and form a thin coat over the sets, which will save them. If the sets (or whole potatoes, where these are used) are too dry to slake the lime, they may be sprinkled lightly with water previously to putting the lime on.

Another thing looks very bad in many collections of plants; this is, a dirty flower-pot, oftentimes as green all over as the leaves of the plant it contains. To prevent this green accumulating, take care that all empty pots are kept clean; and, in a wet day, let a man take a few pots of each size, and, looking over the houses, let him gently turn any plants out that require it, and put them into clean pots of the same size. This may be easily done without making a litter.

Perhaps some of your readers will think the above hardly worth sending to your Magazine; but there are others who are not so well informed, and who, like myself, are glad of any friendly hint, and thankful for any information they may receive. It is for such I write: and should you think this worthy your notice, I may, perhaps, at some future time, trouble you again. The foregoing remarks being applicable at this season of the year, I thought it best to begin with them.

I am, Sir, yours, &c.

Middlesex, Feb. 1834. R. T.

Art. V. *Descriptive Notice of the Garden of the Rev. Thomas Garnier, at Bishopstoke Vicarage, Hampshire.* By the Conductor.

We called at this place, August 20. 1833, and the following notice of it was made the same evening, at Southampton.

Bishopstoke Vicarage, the Rev. Thos. Garnier. — August 20. This is a place of an acre or two, on a bank facing the south, remarkable for its wall, covered with choice half-hardy plants, and its lawn, ornamented with the finest American shrubs and

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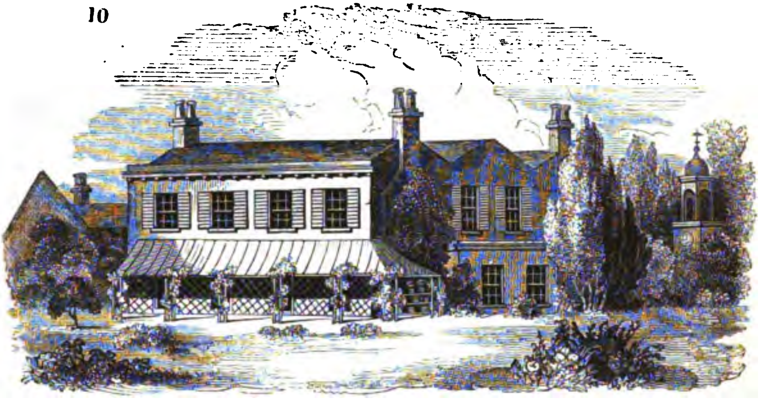

most select trees. It is a perfect gem of botanical beauty in the foreground, heightened in effect by interesting gleams of distant scenery, seen between and over fine oaks and elms, on the lower part of the declivity.

In order to give our readers a correct idea of the details of this garden, so exceedingly rich in choice plants, we applied to Mr. Garnier for a ground plan; and he has obligingly had one prepared for us, of which *fig.* 11. is an engraving. He has also sent us a small view of the vicarage house. (*fig.* 10.) The following are the details of the plan: —

1. Rhododéndron máximum, new. 2. Pink-flowering thorn. 3. Bed of a variety of choice roses. 4. Bed of pinks in summer, China asters in autumn. 5. Córnus flórida. 6. Rhododéndron, a new variety. 7. Rhododéndron catawbiénse. 8. Small bed of Verbèna chamædrifòlia. 9. Large azalea.

10. A'rbutus. 11. Portugal laurel. 12. Laurustinus. 13. Bed of heartseases. 14. Variegated rhododendron. 15. Rhododéndron dàùricum àtro-virens. 16. Large narrow-leafed bay. 17. Rhododéndron pónticum. 18. Two superb elms. 19. Bed of a variety of herbaceous plants.

20. Azàlea ledifòlia (índica álba). 21. Round bed of herbaceous plants. 22. Rhododéndron pónticum. 23. Rhododendron, hybrid. 24. Rhododendron, hybrid. 25. Oval bed of pelargoniums, stocks, and sorts of Ròsa odoràta. 26. Laurustinus. 27. Rhododéndron ròseum. 28. Kálmia latifòlia. 29. Clump of American plants.

30. Hùmea élegans. 31. Oval bed of choice herbaceous plants. 32. Large Rhododéndron arbòreum. 33. *Pæònia Moútan.* 34. Rhododéndron álta-clerénse. 35. Magnòlia grandiflòra, 26 ft. square.

Growing under veranda: — 36. Camméllia japónica myrtifòlia. Caméllia striped, orange-leafed myrtle, and citron. 37. Magnificent broad-leafed myrtle. 38. Caméllia japónica atrórubens. 39. Caméllia japónica, double white. 40. Caméllia japónica *Pompònia.* 41. Caméllia japónica pæoniæflòra, and double striped; and stand of pelargoniums.

42. Magnòlia grandiflòra. 43. Ròsa Bánksiæ. 44. Magnòlia purpùrea. 45. Jasmìnum revolùtum. 46. Magnòlia grandiflòra, 30 ft. high. 47. Noisette rose. 48. Long bank of the choicest American plants, chiefly consisting of the new hybrid rhododendrons; and including all the new varieties of Azàlea índica. 49. Vibúrnum lùcidum.

50. *Aúcuba* japónica. 51. Vase containing pelargoniums, blue lobelias, and Lophospérmum erubéscens. 52. Rhododéndron catawbiénse, variety. 53. Standard Magnòlia grandiflòra. 54. Vase, containing scarlet pelargoniums and Maurándya Barclayàna. 55. Standard Caméllia japónica. 56. Azalea rhododendron, hybrid. 57. Magnòlia purpùrea. 58. Vase, containing pelargoniums, and Verbèna chamædrifòlia. 59. Very large elm, with seats.

60. Rhododéndron arbòreum. 61. Vase of scarlet pelargoniums, and pink Maurándya [? semperflòrens]. 62. Fícus elástica. 63. Red cedar. Juníperus virginiàna. 64. Bed of pinks in summer, China asters in autumn. 65. *Aúcuba* japónica. 66. Nèrium plènum [? N. Oleánder var. spléndens]. 67. Round bed of scarlet and white varieties of georgina. 68. Oval bed of herbaceous plants. 69. Fúchsia grácilis.

70. Chionánthus [?] fúlgida. 71. *Bérberis* diversifòlia. 72. *Yúcca* gloriòsa. 73. Oval bed of Ròsa odoràta and of Calvert's Noisette roses. 74. Pìnus Webbiàna. 75. Oval bed of tree and dwarf roses. 76. Azàlea índica álba. 77. Large standard single-flowered camellia. 78. Oval bed of varieties of hybrid rhododendrons and azaleas. 79. Rhododéndron arbòreum.

80. Large mass of rhododendrons. 81. Round bed of choice azaleas. 82. Rhododéndron magnoliæfòlium. 83. Azàlea nudiflòra coccínea. 84. Bed of varieties of georginas. 85. Ligústrum lùcidum. 86. Kálmia latifòlia. 87. Aristotèlia *Mácqui*, new variety. 88. Bed of hydrangeas. 89. *Araucària* imbricàta.

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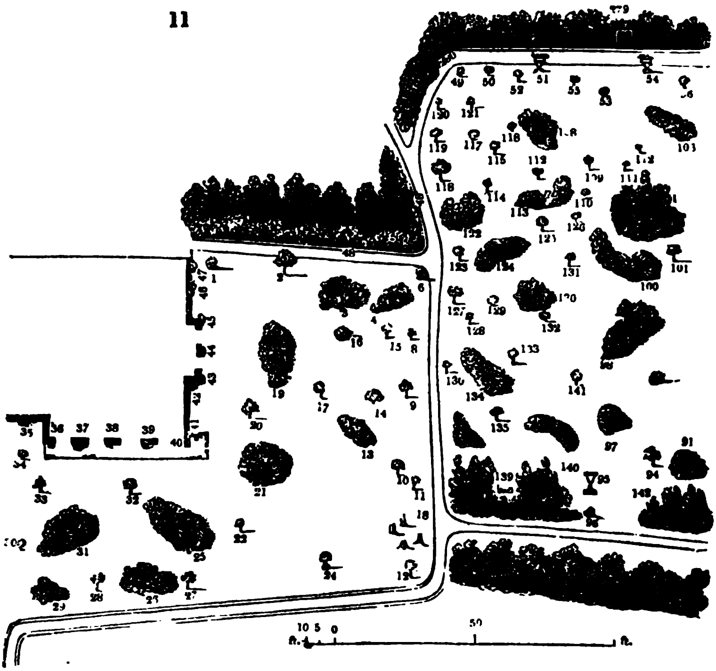

90. Clump of rhododendrons. 91. Round bed of georginas. 92. Edwárd*sia* grandiflòra. 93. Three fine elms in a group. 94. Photínia serrulàta. 95. Large vase. 96. *R*hododéndron microphýllum. 97. Very large rhododendron. 98. Oval bed of choice herbaceous plants. 99. A very large spreading oak tree, with seats.

100. Bed of choice herbaceous plants. 101. Magnòl*ia* auriculàta. 102. Malachodéndron ovàtum. 103. Magnòl*ia* glaúca. 104. Very large clump of rhododendrons. 105. Cotoneáster microphýlla. 106. Bed of sorts of Chinese chrysanthemums. 107. Rhododendron azalea, hybrid. 108. Bed of twelve of Calvert's new varieties of *R*òsa odoràta and standard perpetuals. 109. Gordòn*ia* pubéscens.

110. Dracæ̀na austràlis. 111. Standard *C*ydònia japónica. 112. Azalea. 113. Bed of choice azaleas. 114. Magnòl*ia* citriodòra. 115. *Pæònia Moútan* ròsea. 116. *P*ỳrus spectábilis, large. 117. Edwárd*sia* grandiflòra. 118. Large arbutus. 119. *D*áphne póntica.

120. Chimonánthus fràgrans. 121. Large *R*hododéndron catawbiénse. 122. Large rhododendron and large bay tree. 123. Kálm*ia* latifòlia. 124. Oval bed of choice herbaceous plants. 125. Magnòl*ia* conspícua. 126. Magnòl*ia* cordàta. 127. Round bed of Lobèl*ia* fúlgens and of double tuberoses. 128. Magnòl*ia* máxima. 129. Eriobótrya japónica.

130. Round bed of tree and dwarf roses. 131. Magnòl*ia* Thompson*iàna*. 132. Magnòl*ia* purpùrea. 133. Magnòl*ia* macrophýlla. 134. Oval bed of dwarf georginas. 135. *A*'rbutus procèra. 136. Magnòl*ia* acuminàta. 137. Clump of rhododendrons. 138. Bed of pelargoniums, border of German stocks. 139. Covered seat made with reeds.

140. Fúchs*ia* microphýlla. 141. *R*hododéndron Smíth*ii*. 142. Clump of evergreens and rhododendrons. 143. Oval bed of choice azaleas. 144. Round bed of camellias. 145. *Pæònia Moútan* papaveràcea. 146. *C*upréssus lusitánica. 147. Magnòl*ia* glaúca. 148. Round bed of azaleas. 149. Weeping willow.

150. *Bérberis* fasciculàris. 151. Osmúnd*a* regàlis. 152. Oval bed of herbaceous plants. 153. *P*ìnus occidentàlis. 154. Oval bed of Calvert's Noisettes. 155. *R*hododéndron arbòreum máximum. 156. *R*hododéndron ròseum. 157. Oval bed of herbaceous plants. 158. Aristotèl*ia Mácqui*. 159. Magnòl*ia* purpùrea.

160. Bed for georginas. 161. *Araucària* brasiliàna. 162. Dracæ̀na ovàta. 163. Cedar of Lebanon. 164. Magnòl*ia* glaúca. 165. *V*accínium uliginòsum. 166. *R*hododéndron (old) máximum. 167. Kálm*ia* latifòlia. 168. Single red camellia. 169. *R*hododéndron altaclerénse.

170. Magnòl*ia* tripétala. 171. Oval bed of *C*ydònia japónica, red and white. 172. Large azalea. 173. Round bed of georginas. 174. Magnòl*ia* Thompson*iàna*. 175. Round bed of *V*erbèna chamædrifòlia and of Thunbérg*ia* alàta. 176. *Rìbes* sanguíneum. 177. *R*hododéndron pónticum. 178. Rhododendron. 179. Oval bed of azaleas.

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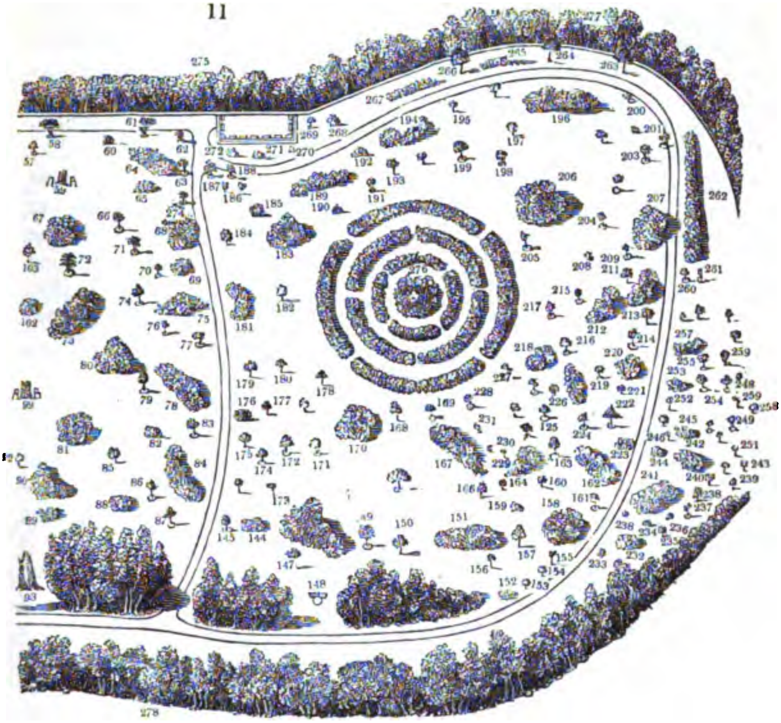


180. Bed of *V*erbèna venòsa. 181. *Sophòra* japónica péndula. 182. *Æ*'sculus rubicúnda (ròsea
Bot. Reg.). 183. Robínia híspida arbòrea. 184. Bed of herbaceous plants. 185. Chionánthus
marítima. 186. Oval clump of rhododendrons. 187. *A*'rbutus longifòlia. 188. *Cratæ*`gus
Azaròlus. 189. *R*hododéndron catawbiénse.

190. Myrtle. 191. Large yellow azalea. 192. Variegated holly. 193. Broussonètia papyrífera.
194. Chionánthus virgínica. 195. *Juníperus* bermudiàna. 196. Round bed of azaleas.
197. Large American bed. 198. Late-flowering azalea. 199. Magnòlia auriculàta.

200. Oval bed of varieties of Lobèlia. 201. *Sophòra* japónica. 202. Oval bed for flowers.
203. *E*rica arbòrea. 204. Rhododendron, new variety. 205. Rhododendron. 206. Raphiólepis
indica. 207. *I*'lex *myrtifòlia*. 208. Bed of anemone-flowered georginas. 209. Cunninghàmia
lanceolàta.

210. Round bed of varieties of pelargoniums. 211. *Diospỳrus Lòtus*. 212. Gledítschia hórrida.
213. *R*hododéndron (new) máximum. 214. Large Kálmia latifòlia. 215. *P*rìnos nepalénsis.
216. *Catálpa syringæ*fòlia. 217. *R*hámnus latifòlius. 218. Chinese arbor-vitæ, *T*hùja orientàlis.
219. *Bérberis* fasciculària.

220. Large Magnòlia tripétala. 221. *C*upréssus péndula [? Schubértia dísticha péndula]. 222. Round
bed of lily of the valley. 223. Myrtle. 224. Hydrangea. 225. Rhododendron, new
variety. 226 . Arbutus. 227. Bed of Scotch roses. 228. Rhododendron. 229. Schinus.

230. Holly. 231. Oval bed of American plants. 232. Bed of dark China rose. 233. *Lèdum*
latifòlium. 234. Rhododendron. 235. Round bed of sorts of *E*rica. 236. Eugenia.
237. Rhododendron. 238. Rhododendron, a new variety. 239. Davaúa denticulàta.

240. *Yúcca* gloriòsa. 241. Variegated rhododendron. 242. Pàvia díscolor. 243. Round
clump of American plants. 244. Magnòlia cordàta. 245. *U*'lex stricta. 246. *A*'rbutus
speciòsa. 247. Oval bed of China roses. 248. Azalea. 249. Rhododendron.

250. Seedling rhododendron. 251. Ammýrsine *b*uxifòlia. 252. Large bed of rhododendrons.
253. Dark *Rìbes* sanguíneum. 254. Virgília lùtea. 255. Dwarf hollyhocks. 256. Bed of
hollyhocks. 257. Round bed of Lobèlia speciòsa, &c. 258. Laburnum. 259. Rhododendron,
variety.

260. Bed of double tulips in spring, scarlet pelargoniums in summer. 261. Bed of single tulips in
spring, of heliotropes in summer. 262. Conservatory. 263. *C*ýtisus purpùreus. 264. The
wall, covered with a collection of choice plants, of which Mr. Loudon has a particular account
in his possession. [See p. 129.] 265. The inner circle, occupied by tree roses and dwarf
georginas; the two next circles, different sorts of dwarf roses; outer circle, collection of herbaceous
plants of the brightest colours. 266. Fence of evergreens. 267. Shrubbery of evergreens
and large trees. 268. Entrance to kitchen-garden, with trellis. 269. Covered seat of
wood. 270. Undulating ground, with large trees.

The first thing we saw, on entering Mr. Garnier's grounds, was a Magnòl*ia* grandiflòra against the house, 27 ft. high and about 25 ft. wide, which was transplanted in the month of August, when in flower, 12 years ago, without sustaining the least injury; the reason being, that every root and fibre was preserved, and the latter not exposed to the air for more than five minutes. There are other magnolias against the house, equally high. The wall, against which are trained so many fine plants, has been built about six years, and is about 10 ft. high, with a coping projecting about nine inches, and a copper trough to collect the rain which falls on it; the latter is found to be a great protection to the roots of the shrubs, and to the herbaceous plants below. Among the plants on the wall, the more uncommon are several of the New Holland species, of the genera *A*càcia, Metrosidèros, Eucalýptus, Melaleùca, &c.

The herbaceous plants, at the base of the wall, are several Amaryllí*deæ*; ixias, and other *I*rídeæ; and a good collection of mesembryanthemums. Among the plants on the lawn are groups of camellias, which stand the winter without any protection, the loquat, myrtles, tree rhododendrons, araucarias; *A*bies Webb*iàna*, and other rare species; all the magnolias, including máxima, and that variety of conspícua which is named citriodòra; the former has flowered, but it dropped without the colour having been ascertained. We must, from necessity, pass over the names of a great number of other valuable plants, as well on the lawn as on the wall, and conclude by noticing a very neat span-roofed conservatory, designed by Mr. Page, and placed on a plinth of three steps, which forms a termination to the terrace walk. The outer border of this walk is ornamented with vases, placed at regular distances.

Among the general principles which regulate Mr. Garnier's management, we shall mention three of preeminent importance: first, he arranges all his flowers and shrubs in masses of one kind, even to the varieties of Georg*ìna*, by which he produces brilliant masses of the same colour; secondly, all his groups and masses are of plain forms, such as circles, ovals, squares, and parallelograms, in the genuine English manner, adopted by Mason in the flower-garden at Nuneham Courtenay, and by the late Major Price, in the flower-garden at Mongewell; thirdly, he transplants the azaleas, rhododendrons, and other American shrubs every year, and at any season of the year, so as to keep every individual plant detached from the rest, though close to them (we saw some beds of azaleas and rhododendrons, which had just been removed, looking perfectly well, notwithstanding the extraordinary dryness of the season); and, fourthly, his great secret in acclimatising, or, in other words, in enabling tender plants to stand the winter in the open air, is to have a perfectly dry subsoil. The owners of gardens will see, from this, that, when a flower-garden or shrubbery is planted, the work is but commenced, and that the care and labour afterwards must be continual.

We have been subsequently informed that the exotic plants against the conservatory wall are covered, during the most severe weather in winter, with common garden matting. The coping of this wall has a copper guttering, making an entire projection of eight inches, which, besides keeping off all perpendicular rain from the wall and the border at its foot, is a protection from perpendicular cold. The soil required for each exotic planted against this wall is renewed every other year; and, in order to do this to the larger articles, the gravel of the terrace walk in front requires to be removed.

The American shrubs grow so vigorously in the groups on the lawn, that they are taken up and replanted every two years, generally in the month of September. The azaleas and rhododendrons are taken up with large balls of earth, and the ground is so well watered, at the time of replanting, that the plants never lose any of their leaves. They are placed at such distances as nearly to touch one another; so that, if they were not taken up, and placed farther apart, every two years, they would soon form a matted thicket, and display blossom only on their upper surface; whereas, by keeping each plant distinct, it displays its blossoms all round from the ground to the summit. The soil in which these American plants are grown is composed of two thirds of sandy peat and one third of rich loam. The loam is absolutely necessary to promote the vigorous growth of azaleas, rhododendrons, and almost all kinds of American shrubs. [See p. 33.]

The great advantage of this garden is, its being situated on a very dry subsoil, without which it is in vain to try to acclimatise such plants as, from the list below, will be found to grow freely, some on the open lawn, and others against the conservatory wall. The great mischief to all tender plants is produced by the late hoar-frosts in March and April, which are generally followed by very hot sunny days; but, when exotics are planted in a genial soil placed on a very dry subsoil, and in a warm sheltered situation, they ripen their wood so well in the autumn, that they are much better conditioned to resist hoar-frosts, and that scorching of the young leaves, which is produced by succeeding sunshine, than such as are planted in rich soils: though the latter may grow more luxuriantly, they never can ripen their wood.

The following list of the ligneous plants which were growing against this wall, when we saw it, was furnished by Mr. Ingram, formerly foreman to Mr. Page: —

*C*aprifòlium flexuòsum, japónicum, speciòsum.
*P*ùnica *G*ranàtum, *G*. plènum, *G*. flàvum.
*R*òsa odoràta, élegans, microphýlla, lutéscens, Bánks*iæ*, B. lùtea, Charles the Tenth.
*M*ýrtus commùnis, c. flòre plèno, c. romàna, c. variegàta.
*C*elástrus scándens.
*C*lématis flórida fl. plèno.
*D*áphne índica, Dauphín*ii* (hýbrida).
Pittósporum *Tobìra*.
Wistàr*ia* Consequà*na*, frutéscens.
O'lea fràgrans.
*A*càcia dealbàta.
Técoma (Bignòn*ia*) grandiflòra, radìcans.
Chimonánthus fràgrans, f. grandiflòrus, f. lùteus.
Magnòl*ia* Soulang*iàna*, grácilis, purpùrea.
*V*ibúrnum rugòsum, odoratíssimum.
Metrosidèros lanceolàta.
Plumbàgo capénsis.
Fúchs*ia* grácilis.
*C*innamòmum *Cámphora*.
Sóll*ya* heterophýlla.
Lophospérmum erubéscens.
*C*lèthra arbòrea.
Eucalýptus oblìqua.
*C*eanòthus azùreus.
Caméll*ia* japónica *Pompònia*, j. plèna álba, j. atrórubens.
*C*ìtrus decumàna, Aurántium.

The following list of trees and shrubs, which stand singly on the turf, is also furnished by Mr. Ingram:—

Magnòl*ia* grandiflòra, g. ferrugínea, g. exoniénsis, conspícua, cordàta, máxima, Thompson*iàna*, longifòlia, acuminàta, auriculàta, pyramidàta, Soulange*àna*, tomentòsa, citriodòra, tripétala, macrophýlla, purpùrea, grácilis.
*Pæòn*ia *Moútan*, *M*. *r*òsea, *M*. *p*apaveràcea.
Piptánthus nepalénsis.
*C*ydònia japónica, j. álba.
A'rbutus *A*ndráchne, serratifòlia, longifòlia, canariénsis.
*D*áphne póntica.
*R*hámnus latifòlius.
*M*ýrtus commùnis.
*P*rìnos glàber, verticillatus.
*P*ùnica *G*ranàtum, *G*. flàvum.
*C*órnus flórida.
Ribes sanguíneum, new var.
Virgíl*ia* capénsis.
Staphylèa trifòlia.
Arália spinòsa.
Gledítsch*ia* hórrida.
Osmúnd*a* regàlis ♃.
Yúcca gloriòsa, filamentòsa, variegàta.
*P*hórmium tènax.
Cotoneáster microphýlla.
Eriobótrya japónica.
*P*ìnus longifòlia, Webb*iàna*, *Cémbra*.
Cunninghàm*ia* lanceolàta.
Stuárt*ia* virgínica.
Malachodéndron ovàtum.
*L*igústrum lùcidum.
Chimonánthus marítima, virgínica.
Photínia serrulàta.
Schubért*ia* dísticha, d. péndula.
*J*uníperus bermudiàna.
*C*upréssus lusitánica.
Sophòra japónica, j. péndula.
Edwárds*ia* microphýlla, grandiflòra.
Gordòn*ia* pubéscens.
Salsòla fruticòsa (Chenopòdium fruticòsum).
Æ'sculus rubicúnda (*r*òsea *Bot. Reg.*), cárnea, pállida.
Pàv*ia* flàva.
*T*hùja orientàlis.
*Catálpa syringæ*fòlia.
Aristotèl*ia* *Mácqui*.
Bérberis ilicifòlia, sibírica, aristàta, sinénsis, rèpens.
Mahòn*ia* *A*quifòlium, fasciculàris, diversifòlia.
Robín*ia* híspida.
Broussonèt*ia* papyrífera.
Dracæ'na austràlis.
Araucària imbricàta, brasiliàna.
Eight hybrid rhododendrons.
*R*hododéndron arbòreum, Smíth*ii*, catawbiénse, *r*òseum, pónticum.

In the American beds are the following shrubs:—

Caméll*ia* japónica álba, j. cárnea, j. *m*yrtifòlia, j. *a*nemoniflòra, j. fimbriàta, j. rùbra, j. rùbra plèna, j. semidùplex, j. *pæoniæflòra*, j. Welbánk*ii*, j. flavéscens, j. *Pompònia*.
Azàlea sinénsis, póntica, p. glaúca, p. albiflòra, p. trícolor, p. *r*òsea, p. globòsa, p. díscolor, p. cùprea; índica álba, í. purpùrea plèna, í. aurantìaca, í. phœnícea, í. hýbrida,

calendulàcea; c. cròcea, c. chrysolécta, c. grandiflòra, c. spléndens; nudiflòra álba, n. corymbòsa; n. críspa, n. globòsa, n. mirábilis, n. magnífica, n. papilionàcea, n. *ròsea*, n. rubéscens, n. stamínea, n. *vio*làcea, n. versícolor, n. versícolor màjor; trícolor, viscòsa; v. odoràta, v. críspa, v. vittàta, v. pubéscens, v. rubéscens; nítida, glaúca, híspida, salicifòlia, coccínea, coccínea màjor, cóncolor, spùria speciòsa, cuprìna, poinci*aniflòra*, precedéntior, míxta triúmphans, nóbilis, venustíssima, flavèola, præstantíssima, insígnis, ne plus ultra, venústa, gloria mundi, speciosíssima, Smíth*ii*, Smíth*ii* coccínea, erythræ`a, Cárton*i*, Herberti*àna*.

ART. VI. *Floricultural Memoranda.* By Mr. T. Rivers, Jun., Sawbridgeworth, Herts.

WHITE Schizanthus, White Clarkia, &c.—I have long been amused with the propensity which some flowers, after being introduced to our gardens, show to vary in colour when propagated by seed. To a man of leisure and observation, it would be worth while to notice how many years, on the average, elapse before this generally takes place. It reminds me much of the varied hues of tame pigeons, tame rabbits, &c., so totally opposite to the sober tints of their wild progenitors.

The same season that the Potentílla Russell*iàna* came from seed, being a regular hybrid between P. formòsa and P. atrosanguínea, I had a seedling as nearly as possible the same, without artificial aid. In the summer of 1833, after seeing, in IX. 465., a notice of Mr. Priest's white schizanthus at Reading, I observed one here in a bed of seedlings, pure white, with the yellow eye of the original. Clárk*ia* pulchélla has also sported into purity; but, of all the freaks of nature, those displayed in the georginas are the most wonderful. About twenty years since, I remember my father purchasing some "very rare plants called dahlias," of Messrs. Lee and Kennedy of Hammersmith: the first season, though taken great care of, they would not bloom, but put forth plenty of elder-like leaves, till the frost killed them; the next season they showed a few flowers, and, as is often the case with novelties, gave all our brilliant anticipations a terrible blow; for who could admire such dingy, copper-coloured, and dull purple star-shaped flowers? and who but the initiated could suppose that all the brilliant and superb varieties now in cultivation could spring from such an origin?

Crocuses.—Nothing is perhaps more interesting than raising seedling crocuses. They bloom in three years, and it is wonderful to see the variety that will be found in one bed; not only in their colour, but in their time of flowering. Some of the varieties have varied as much as six weeks, and thus produced a regular succession of bloom.

Roses.—Perhaps my taste may be singular and formal, but roses always appear to me to have the prettiest effect when budded on neat stems, varying from 1 ft. to 4 ft. in height: they are more easily removed, are nearer to the eye, and their perfume is more readily inhaled. They will soon get over the habit of throwing up suckers, which with some is an objection, if care is taken, when they are removed, to disbud the lower part of the stem, and to take off those roots which seem to have a tendency to throw up suckers. When thus treated, they form pretty compact heads, and yet not lumpish, if properly pruned. We shall soon have as many roses in November as we used to have in June: some recent additions to our perpetual roses from France are likely to prove extremely valuable. I hope next summer to send you a new descriptive catalogue of roses, more worthy of attention than my last, which, I should tell you, was also my first.

Pillars of Roses. — One of the prettiest floral fancies of the present day is that of forming pillars of roses. These pillars consist of roses trained on iron stakes, from 12 ft. to 15 ft. high, well painted; and they form the most durable, as well as the most picturesque, objects in garden scenery. During the ensuing summer, I intend to make an accurate list of all the Noisette roses that are suitable for training in this mode. These, with some of the Ile de Bourbon varieties, added to the already numerous and decided climbing roses, will make a magnificent display. Merely to show how a heap of clay may become a mount of beauty, I last spring levelled and made circular a large quantity of white and blue clay, dug from a pit to contain water: on this, with a small portion of dung and pit sand to each plant, I planted some of all the hardy climbing roses. The effect is now beautiful; and another summer it will be a mount of rose pillars, each from eight to ten feet high.

The best Stocks for Roses. — A prejudice is often found to exist against budded roses, and this has arisen principally on account of improper stocks being used. Most decidedly, roses never bloom so finely as when budded, and the most proper and durable stock is *R*òsa canìna, with its varieties; while *R*òsa arvénsis is, perhaps, the worst. In our nursery we have a great variety of soil in a small extent of ground. We have fourteen acres of strong dark clay; secondly, and within ten yards of the clay, seven acres of sand; and then eight acres of fine soapy loam, and at a short distance rich loose black vegetable soil. I need not say, all this is very convenient; in our clay dressed with sand, roses grow to admiration; and you will think I pursue my (genus) *R*òsa with some ardour, when I can assert with safety that this season we have 25,000 rose stocks, budded and to bud, exclusive of our numerous China roses and roses upon their own roots. In truth, from June to October, the air of our nursery is "redolent of roses." The late Sir John Malcolm, once joking me on my passion for roses, said that I should have breakfasted with him in Persia; for, when on his embassy there, to compliment him, they raised an immense heap, or rather mountain, of rose leaves (it being the season for gathering them), and made him take his morning repast on its summit.

Alpines and Herbaceous Plants we grow extensively; and the following is, perhaps, the most economical as well as the most pleasing method of growing all those of delicate habits and small flowers. On the north side of a hornbeam hedge is a raised platform, 3 ft. wide, formed of two brick walls, each 18 in. high and 4 in. thick, with a hollow space between them, 3 ft. wide, filled with earth, and paved with slates or tiles bedded in mortar. On the tiles are placed the pots, very close together, not plunged in the summer, being shaded by the hedge, and kept well watered, they flourish admirably; and, when the different species bloom, they are placed so much nearer the eye, that their beauties tell with more effect. On the front edge a painted slip of deal is nailed to small piles let in the brickwork. This gives a finish to the whole, and prevents the pots from being displaced. A hornbeam hedge is better than any other, for in summer there is plenty of shade; but, in autumn and spring, as it loses the greater part of its foliage, it admits the sun and air. The worms, the greatest of all enemies to alpine plants in pots, are in this manner completely baffled, and the plants seem to enjoy the trifling elevation, as if they were growing on their native rocks; besides which (this is the economical part), they are never removed to winter quarters, but stand here all the season, merely covered with fern about nine inches thick, laid high in the centre of the platform, and over the fern a single covering of small Prussian mats, which are much better than the large mats. They are the exact width of the platform; and, from the fern being elevated in the middle, and their close texture, all the heavy winter rains run off. As the wind is apt to displace these mats, some poles are laid on each outer edge, which keeps them firm. My platform has been covered this last month or five weeks, from the end of December to the end of January; and, in spite of the very heavy storms that we have had, we find the plants all dry and in excellent order. Keeping them from superabundant moisture is a great object; for frost, if it gets through the fern and mats, has no injurious effect, if the mould in the pots is dry. At intervals of mild weather, in February, they should be uncovered.

T. Rivers, Jun.

Nursery, Sawbridgeworth, Herts,
Feb. 1834.

ART. VII. *A Note on the Culture of Ixiæ and Gladioli.*

By Mr. T. RUTGER.

Sir,

FEELING dissatisfied with what I had seen of the flowering of these bulbs in the nurseries round London, as well as with those under my own care, I was resolved to try the effect of a different soil from that generally recommended [which is, we believe, heath mould, with an admixture of a small proportion of loam], and not cramming so many of them together in a pot as is usually done. The soil used was, one half rich loam, with one fourth of rotten dung, and one fourth leaf mould, both well decomposed and mixed up together with the loam: the pots were well drained, and a layer of the siftings of the dung and leaf mould was put over the drainings. Of the smaller sorts of bulbs I put only two or three into a 48-sized pot; of the larger, only one in a pot of the same size; and of the largest, only one in a 32-sized pot. During their growth, and particularly when near flowering, the bulbs were liberally supplied with water. Under this mode of treatment, my desires were fully realised, and my bulbs produced fine flowers, far superior to any others that I have ever seen grown in pots.

I am, Sir, yours, &c.

Shortgrove, Essex, Feb. 1834. T. RUTGER.

ART. VIII. *The Result of Experiments tried with Coal Cinders as Drainage for Pots.* By Mr. HENRY TURNER, Curator of the Botanic Garden, Bury St. Edmunds.

Sir,

HAVING seen an account in this Magazine (I. 224.) of a quantity of Chinese chrysanthemums being destroyed by having coal cinders placed in their pots for drainage, I resolved to try the effects of these cinders on other plants; and I am induced to send the result for your publication (if you think it worth a place), from observing that cinders are recommended for pot draining, in a communication to a contemporary gardening periodical.

Early in May, 1833, I potted the following twenty species of plants, using cinders instead of potsherds. The plants, being duly marked, were placed among others in the collection; and they, consequently, received the same attention that the other plants did, which were drained in the usual manner. In the beginning of October, I examined the plants drained with coal cinders, and found them in the following state: —

Number and Names of the Plants.	State in which they were found.		
	Dead.	Sickly.	Healthy.
4 *D*elphínium sinénse	3	1	0
2 *C*írsium àfrum	2	0	0
4 Silène marítima	2	1	1
2 Silène marítima flòre plèno	2	0	0
2 Soldanélla alpìna	2	0	0
4 *P*apàver orientàle	3	0	1
2 *L*ýthrum alàtum	0	0	2
2 Erythrolæ̀na conspícua	2	0	0
2 *E*rígeron glabéllus	1	1	0
2 purpùreus	1	1	0
2 *Ph*lóx tardiflòra *Penny* (longiflòra *Sweet*)	2	0	0
2 crassifòlia	1	1	0
4 subulàta	0	1	3
2 *Œ*nothèra macrocárpa	2	0	0
2 missouriénsis	2	0	0
2 acaùlis	0	0	2
2 speciòsa	0	2	0
2 *P*yrèthrum inodòrum flòre plèno	0	1	1
4 *A*sclèpias bombácina	3	1	0
2 *C*lématis Viórna	0	0	2

It will be perceived that, out of fifty plants, twenty-eight died, and ten were so sickly that I threw them away: twelve only remained in a healthy state.

Cinders or coal ashes are also injurious to some plants, when the pots containing them are plunged in the coal ashes, as it will appear by the following fact. The varieties of *C*hrysánthemum sinénse, which were cultivated in this garden in 1832, were plunged about 2 in. below the rims of their pots, at the base of a south wall, for flowering. After flowering (late in November) they were taken up with their roots hanging in all directions over the pots, and plunged in a two-light frame, one division of which was filled with cinder ashes, and the other with common garden soil. In March, 1833, the whole of those plunged in the ashes were pale and sickly, while those plunged in the soil were all robust and healthy; thus proving that coal ashes, as well as cinders, are detrimental to some plants, among which the Chinese chrysanthemums may probably take the lead.

If any of your correspondents would proceed in the prosecution of the enquiry of how far cinders may be used for draining, or what kinds of plants they injure, and what they do not, and would publish the results in your Magazine, the facts contributed could not, when they had become numerous, but avail the deduction of some useful general inference. In relation to this object, I contribute these. I am, Sir, yours, &c.

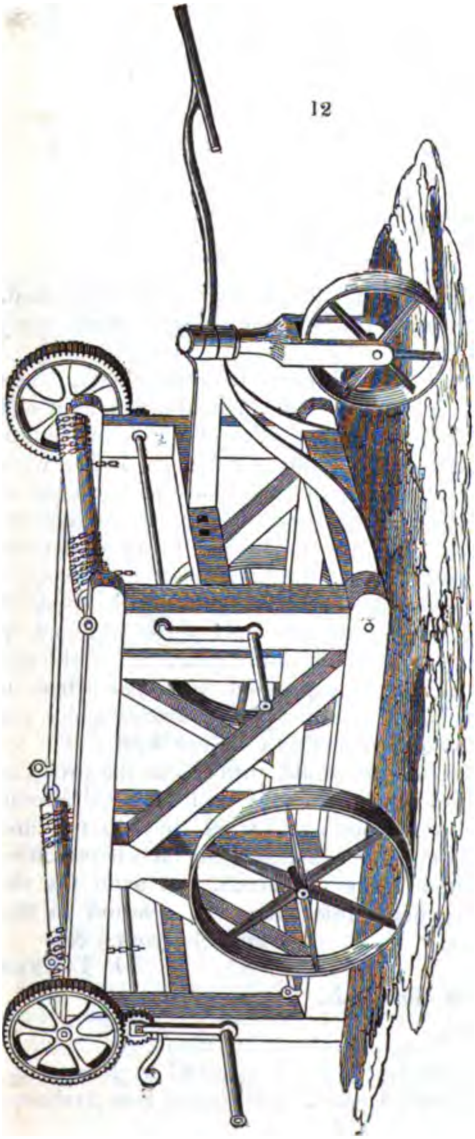
H. Turner.

Botanic Garden, Bury St. Edmunds,
Dec. 5. 1833.

Art. IX. *Description of a Machine for removing Orange Trees and other Plants in large Tubs or Boxes.* By Mr. John Davidson, Gardener to the Marquess of Ailsa, at St. Margaret's, Middlesex.

Sir,

In consequence of the great inconvenience hitherto experienced in the removal of large orange trees, in tubs or boxes, from the orangery to the pleasure-grounds, &c., I lately got made for the Marquess of Ailsa, by Messrs. Cooper and Hall, Drury Lane, London, a machine which answers the purpose exceedingly well, and of which I send you a sketch. (*fig.* 12.)



12

This machine is of an oblong form, 4 ft. 10 in. long, 4 ft. wide in the clear, and 3 ft. 8 in. high. It is fixed upon three cast-iron wheels; two of 30 in., and the other of 18 in. in diameter; the latter turning in a swivel, and acting as a guide to the machine. The frame is of oak, with a movable back, as shown in the sketch; and it is fastened by means of four strong iron pins dropping into iron plates upon the oak frame; which differs from the others hitherto used in this country, in having no bottom. When a tree is to be removed, this movable back of the machine is taken off, and the machine pushed to the box, thereby, in a manner, clipping it; the back is then to be replaced, and two iron bars, with link ends, placed under the box; four chains from the rollers are then hooked into the link ends, and the chains are afterwards wound upon the rollers by means of a cast-iron wheel and pinion attached to the axis of the same, and worked by four hand-winches. This being done, the tree and box remain suspended in the centre; and there is a stopper to each pinion wheel, by the removal of which the chain is unwound, and the tree is, when required, lowered down gradually with rapidity and ease.

This machine possesses many advantages; namely, two men are hereby enabled to carry trees of upwards of a ton weight, which commonly require eight or ten men to effect their removal by a common truck. Also, in some instances, the entrances of orangeries or other houses are too contracted in height to admit of trees being removed upright, and it necessarily takes much time and labour to get them out safely by a common machine; whereas by this one, the difficulty is entirely obviated; for, by winding the chains on one of the rollers more than the others, the head of the tree becomes depressed in proportion, and the purpose is effected without any additional labour whatever.

I am, Sir, yours, &c.
St. Margaret's Gardens, JOHN DAVIDSON.
Nov. 22. 1833.

ART. X. *On the premature Shriveling of Grapes in Forcing-Houses.*

By Mr. J. D. PARKES, F.H.S., Nurseryman, Dartford.

Sir,

A VARIETY of causes have been assigned for that disease in forced grapes which produces a shriveled appearance in the footstalks of the bunches, and also a want of size and colour in the berries; more especially in the Frontignans and muscats. Some consider that it proceeds from the roots being too deep in the ground; others think that it is occasioned by the temperature of the earth in which the root grows (when vines are planted outside the house) being so much lower that that of the atmosphere within; and some attribute the disease to a want of air.

Having observed that early forced grapes are in general free from this disease, and that it never occurs to grapes grown in the open air; and having found, in a house under my care, that some bunches immediately over a steam-pipe were free from it; I have come to the conclusion that the cause is, stagnation of cold moist air; and the remedy, the application of artificial heat, to such an extent (even in summer, when the weather is cloudy) as to admit, every warm day, of opening the windows sufficiently to occasion a free circulation of air.

A gardener, to whom I stated this as my opinion of the subject, has practised my plan every year since, with the most complete success.

I am, Sir, yours, &c.

Dartford Nursery, Jan. 20. 1834. J. D. PARKES.

ART. XI. *On the Coiling System of cultivating the Vine in Pots.* By Mr. JOHN MEARNS, F.H.S., Gardener to his Grace the Duke of Portland, Welbeck, Nottinghamshire.

Sir,

As I have communicated an account of my coiling system of cultivating the vine in pots to several persons, and have also given a statement of my experiments to the London Horticultural Society, I feel it to be a duty also to lay my practice before you.

This coiling system is certainly a completely new feature, and, I think, a very valuable one, in the art of grape-growing. Is it not a matter of great importance that, in consequence of my discovery, a gardener, who may go to a situation, in the autumn, where no grapes have previously been growing, may be enabled to produce there easily, for the ensuing season, from 500 to 1000 bunches of fine grapes? All that are wanting to enable any gardener, so circumstanced, to do this, are, the prunings of the vines from any garden, that would otherwise be thrown away, and, of course, a convenient frame, pit, or house, for growing them in. If abundance of shoots can be procured, and there is a sufficient extent of frames, &c., either temporary or permanent, two, three, or five thousand bunches may thus be produced in a garden where grapes were never seen before.

The coiling system is nothing more than taking a long shoot or cutting from a vine, cutting out all the buds except a few at the upper end, and then beginning at the lower end, and coiling the shoot round and round, say from three to six or eight times, the inside of a pot of 12 or 14 in. or more in diameter. The shoot may be of any length, from 6 ft. to 30 ft., and it may be entirely of last year's wood; or the greater part of it may be of old wood, provided 3 or 4 ft. at the upper end be of new wood; because, as every gardener knows, the buds from young wood are more certain than those from old wood of producing blossom the first year. The vine being coiled round in the pot, and plenty of drainage being put in the bottom, take care that the end of the shoot left out of the pot, on which the fruit is to grow, be not injured at the point where it separates from the coil. This shoot may be 2 or 3 ft. long; and, to keep it steady, it may be tied to a stake, or coiled round two or three stakes. After this, fill up the pot with a rich loamy soil, pressing it firmly against the coil, as if you were making firm the end of a cutting. Unless this is done in such a manner as to bring every part of the coil in close contact with the soil, it will not root so readily as it otherwise would do. The next operation is, to wrap up all that part of the stem which is above the pot with moss, and this moss must be kept constantly moist till the grapes are formed. The pot should now be plunged in bottom heat, either in a pit or forcing-house; but, wherever it is plunged, care must be taken to regulate the temperature of the atmosphere of the house, in such a manner as to prevent the top of the vine from being excited before the roots. If this should happen, the young shoots produced will soon wither for want of nourishment. Abundance of air, therefore, should be given for several weeks, so as never to allow the temperature of the atmosphere of the house, frame, or pit, to exceed 45° or 50°, while the temperature of the medium in which the pots are plunged may be as high as 65° or 70°. When, by examination, you find that fibres are protruded from the coil, the temperature of the atmosphere may then be gradually raised, when the buds will break, and the shoots will grow apace.

The shoots proceeding from that part of the stem above the pot should be led up to within 8 or 10 in. of the glass, and there trained, at that distance from it, towards the back of the pit or house. It is needless to state to the practical gardener, that each shoot will require to be shortened, freed from laterals, &c. Each vine will produce from three to twenty or more bunches, according to the length of coil and variety of grape. I have now (Jan. 17. 1834) upwards of 200 coiled branches in pots, and nearly fifty of them in action; some with twenty bunches of fine grapes on them.

I was asked the other day, whether vines so treated would not require frequent shiftings into larger pots; or, at least, to be shifted once a year. To this I answered, that while we had a plentiful supply of prunings from our own vines, or could procure them from those of our friends, the best mode would be to treat the plants, after they had borne one crop, as we do the roots of asparagus and other plants that we force; that is, to throw them away. If, however, you should wish to keep the coiled plants a second year, and the pots should be found to be too full of roots, turn out the ball, shake the soil from the coil, and cut away all the roots close to the shoot; then repot it as before. If this be done in winter, the plant will produce an excellent crop the following season; probably a better one than if the roots were allowed to remain, and the ball shifted into a larger pot or box. The pot or box is in either case soon filled with young vigorous fibres, like a hatch of young maggots, each eager for food, and consequently sending it up in abundance to supply the crop above. Can there be a doubt but that this is a far superior mode to keeping pots, or even fruit-tree borders, filled up with old inert roots?

Before my bunches are clearly developed, I have thousands of eager mouths or spongioles, extending along the coiled shoot, and each gaping for food; some of these rootlets are 3 ft. long, and, before the vines are out of blossom, many of them are 6 ft. in length, and matted round and round the pot. You will easily understand, from this, how important it is to supply vines so treated with liquid manure, either by watering from above, or by a supply from a saucer or feeder from below.

I am, Sir, yours, &c.

Welbeck Gardens, Jan. 17. 1834. JOHN MEARNS.

SINCE we received the above account from Mr. Mearns, we have heard the article on the same subject, to which he alludes, read before a meeting of the Horticultural Society. In this paper, the names of a number of varieties are mentioned, which had been thus fruited; including the muscadines, black clusters, black Hamburgh, black Damascus, black Tripoli, muscat of Alexandria, &c. Mr. Mearns also mentions that, hearing of a new and fine variety of muscat, called the Candia, which had been a few years ago introduced into the Duke of Buccleugh's gardens at Dalkeith, he wrote last autumn to Mr. Macdonald, the gardener there, for some of the prunings of this vine, and that he had, at the time the paper was written (Feb., 1834), plants of the Candia at Welbeck, from coils of the prunings received, with numerous bunches of fruit on them, which would ripen in April and May next.

We regard this discovery of Mr. Mearns as one of considerable importance, not only as showing what may be done in the particular case of the vine, but as tending to familiarise practical gardeners with some points in vegetable physiology. It is clear that the coiled shoot is a reservoir of nutriment to the young growth; in the same manner as the tuber of the potato is an accumulation of nutriment for the young shoots which proceed from its buds or eyes when planted. To a certain extent, long shoots of any tree whatever, if buried in the soil, either coiled or extended, and two or three inches or feet of their upper extremities kept out of the ground, would produce leaves, blossoms, and even fruit, the first year: but those shoots which, from their nature, do not freely emit fibres, or do not emit them at all, would perhaps not set their fruit; or might even cease to produce leaves in the course of a few months. The reason, in that case, would be, that the reservoir of nourishment soon becomes exhausted, if it is not supplied from the soil; and that the only mode by which the shoot can obtain nourishment from the soil is by means of fibres, which it has either no power of producing at all, or cannot produce in sufficient abundance. The advantages of the coiling system are, that an almost unlimited number of fibres or mouths are produced by it in a very limited portion of soil; and that this soil can be rendered of the most suitable description for the given plant, supplied abundantly with liquid manure, and renewed almost at pleasure. The use of cutting off all these fibres or mouths, when they get too long, is merely to keep them within a limited space; for when a fibre elongates, unless it has, at the same time, room to branch out, so as to produce other fibrils, it can take in no more nourishment than when it is short, say an inch long; because the nourishment is only taken in by the spongiole, or point of the fibre. The whole art of rapid cultivation, both in ligneous and herbaceous vegetables, proceeds on this principle. The Lancashire gooseberry grower has recourse to it, when he shortens the roots of his plants at a certain distance from the stem, every two or three years; thus causing them to emit fibres, for which he prepares a circular trench of rich soil round each tree. (See III. 421.) Mr. Mearns's mode of treating the peach, and other fruit trees, described in the succeeding paper, and the mode of cultivating cabbages, and other plants of that kind, by pricking out from the seed-bed, and transplanting and re-transplanting into rich soil, instead of sowing where the plants are finally to remain, all proceed on the principle of multiplying the mouths, and increasing the supply of rich food, within a limited space. The result of this is, both in ligneous and herbaceous plants, that maturity is obtained with less magnitude than in a natural state, and in a much shorter time. The essential principle is the abundant supply of rich nutriment; and the same principle produces exactly the same results in the animal kingdom. Hence the small-sized early-fatting varieties of cattle, sheep, swine, &c.

Where a plant or animal is grown or reared chiefly to be consumed as food, the application of this principle seems desirable and advantageous; but where the natural character and beauty of the plant or animal are desiderata, a more natural mode of treatment, or one more resembling that which is generally followed, is requisite for attaining the end in view.

All intricate operations of culture, such as those of the coiling system, the chambering of the roots of trees, taking up and replanting, particular modes of training, ringing, &c., it should never be forgotten either by gardeners or their employers, are only calculated for places where abundance of men are kept, and where also there is considerable skill in at least one or two of these men. When these and similar operations are attempted in places where there are scarcely hands enough to keep a garden in order by the common practices, failure is certain to attend either the new practice or the old ones, and probably both. — *Cond.*

ART. XII. *A Defence of the Practice of Cropping the Borders in which Wall-Fruit Trees grow; and various Considerations in relation to the Culture of Wall-Fruit Trees.* By Mr. JOHN MEARNS, F.H.S.

Sir,

THE practice of preserving the borders in front of wall trees from crops is, I have observed, repeatedly recommended and applauded in your Magazine: I beg to state, however, that, from long and attentive observation, I consider my wall trees to have been benefited rather than injured by a judicious cropping, if a proper supply of water, in the swelling season, where the ground is dry, be administered. But, even if the trees were not benefited by it, I would advocate the cropping of the borders; because I consider south borders, protected by 14-ft. or 16-ft. walls, of much greater importance in producing the supply of vegetables necessary for a family, than any other part of a kitchen-garden. Borders thus protected bring forward so many autumnal, winter, and spring crops, that, if some little sacrifice of the fruit crop should arise from growing vegetables upon them, it cannot come into competition with the loss of culinary products which must result from not cropping them. I have here about 12 acres of good kitchen-garden, and yet I should be loth to fallow any of my south borders. One crop must follow another in quick succession, but I am careful that each successive crop is different in affinity from the last; and, by such attention, I consider the ground well prepared with an abundance of choice food for the next desired article, so that no injury is produced to my fruit.

Standard Fruit Trees in Kitchen-Gardens.—I wish that those who advocate so strenuously the retaining of south borders free from all crops, had rather taken up their pens to condemn the notorious practice of planting open standard fruit trees all over otherwise fine kitchen-gardens; their papers might then have produced some useful effect. Those who are short of garden ground, and have but little room to spare, are obliged to procure all they can in the least compass; and this object, in kitchen-gardens in which fruit trees must be grown, may be much promoted, with little sacrifice of culinary vegetables, by the adoption of pendent trees of only one shoot. It is needless to plant standards at random all over noblemen's and gentlemen's gardens. To do so evinces a bad taste, because such trees take off the good effect of a well-laid-out, and otherwise well-managed garden, and are most unsightly as well as most injurious cumberers of the ground; and, consequently, ought to be discarded wherever they can possibly be dispensed with. Substitute, as a compensation, an elegant display of numerous well-managed espaliers judiciously fixed, and pay a nice attention to wall trees. No one need fear having plenty of fine fruit upon the "old antiquated fan form of training," if a due and judicious attention be paid to the trees at all times. The spur-bearing kinds require the spurs to be kept short, and not trimmed too early in the summer, so as to excite the embryo blossom buds to burst prematurely into shoots: when this precaution has been observed, an abundance of blossom buds will be formed, and in every part of the trees, for the following season. If the intended bearing branches are made to droop as much as they will bear, this posture will check the superabundant sap, and induce fruitfulness.

On destroying the Insects which infest Fruit Trees.—It is of the utmost importance to the success and general well-being of all fruit trees, that they be kept perfectly clear from insects, parasites of all sorts, and all extraneous matters. Winter is the best season in which to operate for effecting this object; and, with regard to fruit trees trained against walls, we ought to commence by loosening all of them from the wall, and giving them regular and judicious pruning. After this, begin upon the main stem, even below the surface of the earth, by removing a portion of the soil, and diligently scrape or pare, if the case be such as to require it, every part, even to the extremity of each branch. Afterwards wash the whole of the wall most completely with the following preparation:—Take strong lime-water, after it has settled into a perfectly clear state (so that none of the lime remains, farther than what it holds in solution), and mix in it about a fourth part of strong tobacco liquor; some soft soap, 1 lb. to a gallon; and about 1 lb. of flower of brimstone, or of sulphur vivum, either will answer: if some black pepper, ground very fine, be added, it will be an improvement. This preparation will clear the wall most completely from every kind of insect. After the trees are again dry, have a mixture ready, composed of the above ingredients, but in stronger proportions; and, instead of the lime-water, use chamber-lie, or the strong drainage of a farmyard; and, lastly, thicken it to the consistence of good thick paint, with quicklime dissolved in it. Take painters' brushes of different sizes, and coat the trees completely over with the mixture, not leaving a chink, or the axil of a bud, without working the mixture well into it. Use the whitest lime you can get for the purpose, that, when dry, you may readily see where the brush has missed. It is best to coat every part completely over two or three times, and it will kill everything that is not concealed in the bark. In pear trees, the insects of the last class are our greatest pest. I wish some one would be kind enough to inform us how to get rid of the warty pest, which does not, I believe, commit its greatest ravages in that state. Will Rusticus of Godalming be so kind as to give us the history of this destructive insect? I think we have no enemy so resistless as this; all others fall beneath the above dressing. [See IX. 328. 332. and 498.]

On limiting the Extension of the Roots of Wall Trees.—I am a strong advocate for confining the roots of wall trees, as well as those of grape vines; and I assure you that, if it is judiciously executed, it is a most excellent practice. I only allow 18 in. for the depth of soil in my borders, upon a well-laid paved bottom, hollow underneath; with a flue, or hot-water pipes, if either of these can be had, in the hollow; the joints being securely cemented, to prevent the roots from striking through into the chambering. I wall in my roots at 6 or 8 ft. from the main wall, although less will be sufficient; and place plugs in shafts, through the paved bottom, at suitable distances, to enable me to drain it perfectly in very rainy weather, heavy falls of snow, or rapid thaws. Let the soil in which the trees are planted be used as soon as it can be got together, by paring it off a fine pasture field, or a fine sheepwalk, taking the turf only about 3 in. thick; if not very good, 1 to 2 in. will suffice, and the fresher it is used the better.

On removing Wall Trees, and renewing the Soil for them.—I would renew my borders, and remove my trees, every three or four years. By removing part of the soil from the surface every two or three years, and by cutting off the matted roots, about 2 ft. from the confining wall, taking out soil and all, and filling up the vacancy with fresh turfy soil, recently pared, and roughly chopped, the trees will do well for thirty years. The removed soil is excellent for most other horticultural purposes. Fine training is of importance, as far as appearance goes; but productive trees and fine fruit can be produced without much attention being paid to that part of the art, as I have very frequently witnessed. By attention to cleaning and chambering, these desirable results will be found to be effected with much more certainty, and the processes recommended to be well worth all the expense they may occasion. If I did not crop my borders, when of the above width, and conducted upon the above principle, the sacrifice would not be of such consequence as the loss of the whole of a border 12 ft. or 16 ft. wide, as there would still be a fair space left for many of the most important culinary vegetables; but with such a mode of treatment as that which I have recommended, there is no fear of impoverishing the trees by light crops of any kind.

The soil which I use for the most important purposes is the turfy surface from the top of a high limestone rock of the brown magnesian kind. It has been a confined sheepwalk time out of mind. I like it best fresh, and only coarsely chopped for my borders, so as to encourage a rapid fermentation about the roots; this I take to be of far greater importance than time thrown away by fine training in slow hands.

Chambering of Borders.—It may be judged by many, that my method of chambering borders for fruit trees is an expensive one; but it is much better, where stone and lime are readily at hand, to incur the attendant expense, than to sacrifice the whole of a 12-ft. or 16-ft. border. Our cold wet bottom requires it; but, even upon a more congenial subsoil, I should recommend a secure and well-walled chambered bottom, and the frequent removal of the trees, and renewing of the soil, to insure good crops; but upon no occasion whatever should I mix rotten dung with it as a manure: the chopped turf above mentioned I consider at all times the best. I chambered last season a frontage of my graperies of 200 ft.; and have admitted much of the heat of the flues, and atmosphere of the houses, underneath the borders. I have rafters and lights to put over these borders in the early part of the season, and these can be connected with a hollow wall round the vine roots, so as to admit a free circulation between the heated air beneath the glass and that in the chamber below the border. I intend to chamber about 200 ft. of vinery frontage this season, and I am now preparing for it.

It may be well to state to you, that I have planted all my old vines again, and that they have made remarkably fine wood. An old Muscat has 22 fine bunches of grapes upon it. I put in a branch of the same vine, 10 ft. long, without roots, which has made excellent wood, and produced a fine bunch of grapes: the black Damascus and black Tripoli have done the same.

I am, Sir, yours, &c.

Welbeck Gardens, Ollerton, Sept. 16. 1833. JOHN MEARNS.

Further Observations on confining the Roots of Wall Trees, &c. — I am very certain that the peach, plum, apricot, &c., if judiciously planted and attended to, require but a very small space for their roots to extend in. A depth of 14 to 16 in. is better than a greater; and a parallelogram of 9 ft. by 4 ft. is an extent of sufficient capacity for a tree to cover profitably with its roots. By attending to this, but a very small portion of the 12-ft. to 16-ft. borders will be lost, as 3 ft. is the proper distance at which to keep general crops from the walls, where there are proportionable borders. A few small things, which require protection, may be put close under the walls, and upon the chambered borders, and will do no harm. The bottom of the walled pits for each tree should be paved, and neatly set in good mortar (I mean, with the stone squared, and mortised joints) upon chequered brickwork; two to three or four layers deep, as the state of the bottom may be, leaving three or four holes at the lowest places for the wet to drain off. Plant the trees in fresh turfy soil of a fine mellow hazel loam; and, as required, mix fresh-chopped turf occasionally with a little of the same. In the course of five or six years it will be found that the roots have got much matted round the walls, and that the tree has lost much of its usual vigour in consequence, the fruit being not so fine: when such is the case, cut out a trench from a foot to a foot and a half broad round the walls which were put to confine the roots, and take out the soil and roots completely to the bottom, filling the space up again with the usual fresh-chopped turf. Take off the top soil from the roots, and fill up with the fresh, forking it well in amongst the roots, and mixing it with the remaining soil as far as can safely be done. The trees will soon display an extraordinary degree of vigour, with rarely the least appearance of gum or canker, and will bear the finest fruit.

It is an excellent method to take the trees completely out of the pits every five or six years; and to renovate the soil with the fresh-chopped turf, taking part of the exhausted soil out, before planting the trees again. If done with a judicious hand, a plentiful crop of fine fruit is obtained the same season. I beg to state that this is the best method to manage all wall fruits, with some variation in the chambering. For peaches, nectarines, apricots, plums, and grape vines in forcing-houses, it exceeds every other method, and the less animal manure is used for all these the better. J. M.

Welbeck Gardens, Jan. 17. 1834.

Art. XIV. *On forcing Asparagus;* by Mr. T. Rutger: *with an Account of the French Method,* translated from the "Bon Jardinier" for 1834.

Sir,

In the routine of framing, I conceive the forcing of asparagus to be one of the most simple practices to accomplish; and, when any thing like a proper treatment is given, success is certain. Nevertheless, as that treatment is not generally known, a few hints upon the subject may, perhaps, not be amiss.

In every department of forcing (blanching excepted), the nearer we can bring the article forced to the state of perfection which it exhibits in the natural state, the better. This, I think, will be conceded by every one conversant with gardening; and the consequences which will naturally follow the adoption of such a rule are, that a higher degree of flavour will be obtained, as well as a more natural appearance in the article, whatever it may be.

With regard to the asparagus which is brought to Covent Garden Market during the forcing season, I have observed most of it to be nearly as white in the part grown above ground as in that below; which is no doubt occasioned either by excess of bottom heat, or for want of light and air, or both combined. A sad mistake this in the cultivators, whoever they may be. Defects may be excusable in some kinds of fruits or vegetables, which are very difficult of culture; but, in growing asparagus, I conceive there is no reason why any difficulty should exist; nor will it argue any thing in favour of the practice, to attribute it to the desire of bringing the shoots earlier into the market, as, by planting the roots a fortnight or three weeks sooner, this might be accomplished. The fact is (and I write from experience), that, in growing asparagus in artificial heat, the slower the process the better. The heat below should be very moderate, and, as soon as the buds appear above ground, all the light and air that can be given with safety should be freely rendered; and by this means the asparagus, instead of presenting the blanched appearance which it often does, would not only assume more of its natural hue, but its flavour would be improved, and its size augmented.

Since writing the above, I have met with a paragraph in your Magazine (p. 86.) which hints that a further knowledge is necessary to be acquired in this country, in order to produce asparagus of a good quality; and I should be glad to see what the *Bon Jardinier* for 1834 says upon the subject, although I think enough has been given in your *Ency. of Gard.*, with respect to the preparation of beds, roots, &c., for the purpose. It is in the after-treatment, I conceive, that the fault principally lies.

I am, Sir, yours, &c.

Shortgrove, Feb. 1834. T. Rutger.

Forcing Asparagus, as practised in the Neighbourhood of Paris. — In compliance with Mr. Charlwood's suggestion (p. 86.), and with the wish expressed by Mr. Rutger, we translate the passage alluded to, which is as follows: — Asparagus is obtained in winter and early spring on uncovered dung beds, or on dung beds covered with glazed frames, by various methods; of which the two following are those most generally used by the gardeners in the neighbourhood of Paris.

Forcing White Asparagus. — By this mode asparagus is forced without removing the plants from their places in the open garden. The asparagus beds are laid out 4 ft. wide, and paths 2 ft. wide are left between them. The beds are made up, and manured with more than ordinary care, and they are planted with four rows of plants; the rows being a foot apart, (which leaves a space 6 in. wide between the outside row and the path, on each side of the bed), and the plants being 9 or 10 in. from each other in the row. The beds are carefully attended to, and cultivated during three years. Forcing is commenced in the fourth year, from December till March, according to the demand. The paths are hollowed out to the depth of 18 or 20 in., and the earth taken from them is thrown on the beds: the paths are then filled up with hot dung well trodden down, and glazed frames are put upon the beds, the frames being filled up to the glass with hot dung. The beds are raised 3 in. or 4 in. by the earth thrown upon them from the paths, and this is done to increase the length of the blanched shoots of asparagus. Twelve days after putting on the frames, a little of the dung in them is lifted up with the hand, in order to see whether the asparagus has begun to push: when it has, all the dung is taken from the inside of the frames, and the heads of asparagus are cut as they attain the desired size. The sashes should not be more than 6 in. from the soil. The heat is kept up by renewing and stirring the dung in the linings, and by covering the frames with straw during the night, and in bad weather. In April, the frames are taken away, and the dung is removed from the paths, which are again filled with the earth which was thrown on the beds. The plants are then allowed to rest a year; but the second season they may again be forced, and so on alternately, as long as the produce is satisfactory. The asparagus thus obtained is called white asparagus by the Parisian gardeners, as the heads have very little colour; but there is another kind, which is called green asparagus, which may be raised by the following method: —

To force Green Asparagus. — From December to March, beds of hot dung, 4 ft. wide and 2 ft. high, are made successively as required; and these beds are covered 3 or 4 in. deep with vegetable mould, or rich black earth; on this are placed the frames, which are covered with straw to increase the heat. When the beds are in a proper state, they must be planted with asparagus plants three or four years old; or with old plants from beds about to be destroyed, the roots having been first reduced to an equal length, say 8 or 9 in. The roots are placed in the beds on end, so close together as to support each other, and so as to have their buds all nearly of the same height, mould being pressed between the plants with the hand, so as to fill up all vacuities. The frames and sashes are then put on, and the asparagus soon begins to push. The shoots are small, but very green. As the roots do not continue throwing up shoots more than a fortnight or three weeks, it is necessary to make but few beds at a time, to renew them often. This green asparagus is chiefly used in Paris, cut into small pieces, as a substitute for green peas. (*Le Bon Jardinier* for 1834, p. 187.)

ART. XV. *Short Communication.*

THE Seed of the common Cowslip, sown in the garden, it is well known, produces numerous varieties; particularly many with blossoms more or less of a red colour, which may be considered as the first approach towards a polyanthus, and are often very brilliant and beautiful. A red-blossomed cowslip in my garden this year produced some very large heads: I had the curiosity to count the individual blossoms on one of the stalks, and found them amount to 173; there were two other stalks about the same size, besides nineteen smaller ones. Thus, there were produced, by one cowslip root, the large number of 685 pips or blossoms; viz. three large bunches containing 173 each, and nineteen smaller ones producing together 166. — *W. T. Bree.* *Allesley Rectory, Aug.* 20. 1833.

REVIEWS.

Art. I. *Catalogue of Works on Gardening, Agriculture, Botany, Rural Architecture, &c., lately published, with some Account of those considered the most interesting.*

Clarke, Alexander Cowden, Author of "Tales in Prose from Chaucer:" Adam, the Gardener. 12mo, pp. 279. London, 1834.

The objects of this little work are, to instil into the minds of youth a love for "the beautiful face of Nature, its green fields, the shining sun, and the sailing clouds;" to convey to them, at the same time, a taste for gardening and natural history; and to implant in them humane feelings and liberal opinions. As a work of gardening, it cannot be considered as addressed to the practical man; and therefore we do not feel ourselves called upon to enter into its details of cultures, though, as far as we have examined them, they are unobjectionable. To all those, however, who wish to imbue the minds of youth with a love of rural nature and a taste for the cultivation of the earth, we can most strongly recommend it as one of the best of books. It is written in an easy and attractive style.

Royle, J. Forbes, F.L.S., late Superintendent of the Honourable East India Company's Botanic Garden at Saharunpore: Illustrations of the Botany and other Branches of the Natural History of the Himalayan Mountains, and of the Flora of Cashmere. In 4to parts, with coloured plates, 20*s.* each. 1834.

Part II. has just appeared: it supplies descriptions of the plants figured in the eighteen plates published in the first part, and contains eleven additional plates. Of these one is devoted to an exhibition of sections of the geology of the parts of country spoken of, and the ten plates bear pictures of plants to which the following names are applied: — *Po*lýgala *M*yrsinìtes, furcàta, crotalariöìdes, triphýlla; Silène Falconer*iàna*; *L*ýchnis fimbriàta; Leucostémma latifòlia, angustifòlia; Arenària *festuco*ìdes; *G*ossýpium herbàceum, arbòreum; Eùrya acuminàta; *H*ypéricum japónicum; Cedrèla serràta; *C*íssus *r*òsea, capreolàta; *G*erànium Lindley*ànum*; Impàtiens bícolor, glandulífera.

Booth, J. and Sons, Proprietors of the Flottbeck Nurseries, Hamburgh: A Catalogue of the Hardy Plants in their Collection. Part I. Hardy Plants. 8vo, pp. 116. Hamburgh, 1833.

This is an exceedingly well got up catalogue; and it is printed on much better paper than is generally the case with German publications. It will be particularly useful to the English reader, by giving him the German names of all the plants in general cultivation; and it were much to be wished that similar catalogues were prepared by eminent French and Dutch nurserymen. Honourable testimony has already been paid in this Magazine, by Professor Agardh (IX. 417.), to the science, liberality, and industry of the Messrs. Booth.

The arrangement of this catalogue is popular, and quite characteristic of the German school. It is divided into, fruit trees; forest trees, for park and forest scenery; fir trees, for shelter-hedges; ornamental trees, for groups; evergreen trees, for groups; berry-bearing trees; weeping trees; plants for ornamenting graves (these are choice perennial spring flowers, and different kinds of periwinkle); twining and climbing plants; hedge plants; peat-earth plants; trees and shrubs for use in laying out grounds; perennial herbaceous plants (those which are evergreen being designated by marks); middle-sized georginas; double-flowered dwarf georginas; double anemone-flowered georginas; pæonies; auriculas; carnations and pinks; heartseases (18 sorts, with names); new select flowers; culinary vegetables; hops; and *A*corus *C*alamus, which is sold by the hundred. The second part of this catalogue will contain house plants.

Charlwood, George, Seedsman, 14. Tavistock Row, Covent Garden: A Catalogue, for 1834, of American and other Tree, Shrub, and Herbaceous Plant Seeds, imported for sale. A folio sheet, for being sent by post.

This catalogue enumerates 420 articles; and has, besides, a postscript, stating that a further collection of seeds from the Southern States is daily expected; of which a supplementary list will be immediately printed. The prices put to all the articles are remarkably low; in some cases, twenty-six sorts of herbaceous plants for a shilling! A great many tree and shrub seeds are included in this catalogue: for example, 24 species of pines, 10 of oaks, 8 of birch, 10 of walnuts and hickories, 5 of magnolias, 7 of ash, 10 of *H*ibiscus, 6 of *I*'lex, &c. Whoever has a good gardener, and wishes to rear an arboretum, or to have a good collection of herbaceous plants, cannot go a cheaper way to work than by sending for this catalogue and making a selection from it.

Dennis and Co.: A Catalogue, for 1834, of Pelargoniums and Georginas. Printed on a folio sheet, to be sent by post.

This catalogue exhibits a rich store of varieties of pelargoniums and georginas, distributed into sections, according to the colours of the flowers. The price of almost every variety is affixed to it, and in the georginas the height also. In both families, a good many varieties "have been struck off the last published catalogue, to make room for those of more recent date and far greater beauty, which are denoted by an asterisk before each name." With the merits of the latter we have not had an opportunity to become personally acquainted, but we are assured that they are of a high quality. Among the varieties of established excellence we observe habránthum, marked at from 5*s*. to 15*s*., according to the size of the plant; Dennis's Queen Adelaide, Lord Ravensworth, and Ne plus ultra, each at from 5*s*. to 10*s*.; Queen of Scots, 2*s*. 6*d*. to 5*s*.; fúsco superb, 3*s*. 6*d*.; Weltje*ànum*, 10*s*. to 20*s*.; queen of roses, 2*s*. 6*d*. to 5*s*.

Among the georginas, the following kinds are, we have learned, those of real merit, and deserving culture generally. We retain the star to those marked as new ones: — White: fimbriàta álba, 3*s*.; king of the whites, 2*s*.; paper white, 5*s*.; queen of the whites, 3*s*. 6*d*. Striped, spotted, or shaded with lilac or purple: * álba purpùrea, 4*s*.; * Ariel (no price to this); * Desdemòna, 5*s*.; guttàta màjor, 5*s*.; pencilled white, 3*s*. 6*d*.; queen of Belgium, 5*s*.; * queen of dahlias (georginas), 7*s*. 6*d*.; * Rosette, 3*s*. 6*d*.; striàta, 3*s*. 6*d*. Blush, &c.: Anne Boleyn, 1*s*. 6*d*.; * blánda perfécta, 5*s*. Lilac: * fair Devonian, 3*s*. 6*d*.; Levitt's lilac, 2*s*. 6*d*.; * superb lilac, 2*s*. 6*d*. Rose-colour, pink, &c.: * Diana, 3*s*. 6*d*.; Lady Grenville, 3*s*.; lasting rose, 2*s*.; surpasse-triomphe, 1*s*. 6*d*.; Wells's dénsa, 1*s*. 6*d*. Yellow: * Comus, 3*s*. 6*d*.; jaune insurmountable, 5*s*.; * Jason, 3*s*. 6*d*.; king of yellows, 5*s*.; * sulphùrea perfécta. Spotted or striped with red or purple: * Algernon Sydney, 5*s*.; pícta, 2*s*. Buff and salmon-coloured: Flora Macdonald, 5*s*.; maid of St. Leonard's, 3*s*. 6*d*.; * aurántia speciosíssima, 7*s*. 6*d*.; aurántia pállida, 2*s*. 6*d*.; * emancipation, 2*s*. 6*d*.; globe orange, 2*s*.; Prince of Orange, 3*s*. 6*d*. Red: * Constántia perfécta, 5*s*.; Lady Sydney, 2*s*.; * Remus, 3*s*. Striped or shaded with orange: * Lovely's Lord Grey, 5*s*.; * pícta formosíssima, 5*s*.; Zebra, 1*s*. 6*d*. Scarlet: Barrett's William IV., 2*s*.; beauty of Cheshunt, 2*s*.; * beauty of the vale, 5*s*.; coccínea multiflòra, 3*s*. 6*d*.; * coccínea perfécta, 10*s*.; Duchess of Richmond, 2*s*.; * Dennís*ii* coccínea, 10*s*.; globòsa, 2*s*. 6*d*.; * óculus sòlis, 3*s*. 6*d*.; * Phœbus, 5*s*.; scarlet perfection, 10*s*.: * Widnall's rising sun, 3*s*. 6*d*. Ruby-coloured: * beauty of Campden, 10*s*. 6*d*.; * Springfield rival, 5*s*.; Widnall's perfection, 5*s*. Shaded rose, shaded purple, &c.: Adeliza, 2*s*. 6*d*.; Elliott's king, 3*s*. 6*d*.; * Lady Harcourt, 2*s*. 6*d*.; metropolitan, 3*s*. 6*d*.; * perfécta màjor, 5*s*. Crimson: Justinia, 3*s*.; * Walter Boyd, 7*s*. 6*d*. Striped or shaded with black or white: Levick's commander in chief, 3*s*. 6*d*.; Levick's incomparable, 2*s*. 6*d*. Purple: Lord Liverpool, 3*s*. 6*d*.;

* Voltaire, 3*s.* 6*d.*; Wilmot's superb, 2*s.* 6*d.* Dark maroon, purple, puce, &c.: Black Prince, 2*s.* 6*d.*; * beauty perfect, 5*s.*; Dawson's victory, 2*s.*; * erécta, 5*s.*; * Granta, dark claret, fine-cupped petals, 10*s.* 6*d.*; * Lord Althorp, 5*s.*; * nigress, 3*s.* 6*d.* Globe-flowered: Circe, 3*s.* 6*d.*; compácta, scarlet and orange, 3*s.* 6*d.*

Of the new kinds, marked by an asterisk, there are eighty, besides those with that mark which we have quoted.

Rennie, James, M.A., Professor of Zoology, King's College, London: The Handbook of Gardening. 18mo. London, 1834. 1*s.* 6*d.*

This little book, produced at the instigation of Mr. Menteath, jun., of Closeburn, deserves to be favourably received by the public, from the excellence of the intentions of the parties connected with it. In our opinion, however, it is by no means the sort of work calculated to attain the end in view. Such a book, indeed, could not be produced by a mere London author. The man who, of all others that we know, either in Scotland or England, could produce the best "Handbook" for the Scotch cottager is Mr. Gorrie; and, if we are not mistaken, we mentioned this to Mr. Menteath when he applied to us, above a year since, on the subject of a "Handbook" for Scotch cottagers. All that the Scotch cottager wants might be contained in one number of Chambers's *Information for the People*, and sold for 2*d.*, instead of being swelled out into an eighteen-penny volume, by mere size of type. Such a number of Chambers's, joined to his number on cookery (No. xvii.), the latter being altered a little, and rendered more economical, would form a useful fourpenny-worth to every working man who had a wife and a home. Let us hope that Messrs. Chambers will produce such a number.

Allen, William Ely, Gardener to the Rev. M. G. Edgar, Red House, Ipswich: A Treatise on an entirely original System of cultivating Cucumbers, Melons, and Sea-kale, forcing Broccoli, Potatoes, &c. &c.; with an Address to the Gardeners of Suffolk, and a practical Critique on "Smith's Treatise." Pamph. 8vo, pp. 28. Ipswich, 1834. 5*s.*

This work has the great attraction of being concise; no small merit in this bookmaking age. We also found, on looking it over, that the end in view is proposed to be obtained, not so much by the use of new machinery, as by an improved use of the machinery already in existence. In what the "entire originality" of the system consists we have been at a loss to discover, and we therefore think that the author is somewhat unreasonable in his demand of 5*s.* for the same quantity of printing and paper as we sell for 6*d.*, independently of our engravings. On looking over the work, we find that Mr. Allen's seed bed "is made up in the third week of October, and that it is a common bed," with long manure at the bottom and rotten manure at the top, &c. To maintain a beautiful dark green foliage on the cucumber plant during winter, it is recommended to make up new beds, and remove the plants into them; or to refresh the interior of the old ones in the following manner: — "In the middle of November, although there is a lively heat in the bed, the air of the frame (more particularly in foggy weather) is found to be in a very impure and unwholesome state. In such cases, after two or three successive dull and foggy days, and [during which] the lights have been kept continually close, on the first fine day after, take the lights off; [then] place a hand-light over the pots of plants; take a sponge and wash the inside of the frame all round; wipe it dry; and, if the weather permits, the lights may remain off an hour or two. A little cold will not signify; it will make the plants hardy. Stir the mould, wash the lights, and put them on the frame; distribute the pots about the bed, and, the impure air which had collected during the foggy days being entirely obliterated [dispersed], the plants will show visible signs that they are in a more healthy atmosphere. Although V. C. has been attached to my name, M.D. has not; but, I think, every one will see how feasible the following observation is: — Where an invalid has been confined to one room for several weeks, perhaps months, when a fresh person enters that room, the impure air is instantly discovered, which has collected by the room being so much confined. Is it not possible that a fresh room, well aired and warmed, would prove beneficial to the invalid, if removal was possible?" (p. 4.)

This idea of purifying the air of a cucumber frame appears to us rational, though, we believe, the good effected is not so much by purifying the air; that is, removing from it any deleterious gases or poisonous matters held in suspension; as by getting rid of that excess of moisture which air in hotbeds always contains in the winter season. Hence it is that cucumbers do so well in the winter season in hot-houses, where the air is always drier than in frames.

Under the head of "Peculiar System of Cultivation" (p. 10.), we were surprised to find so little that can be considered peculiar. The following sentence, however, may perhaps come under this head: — "After a fruit has been impregnated two days (for I have proved that to be the best and most proper age to direct all virtue to the fruit), by pinching out the eye at the fruit, the one before and after, and stopping the runner, is the way in which my fruit has been made to run so far before my neighbours'. If this operation is performed before the fruit is two days old, it is not of proper age to receive the virtue which is directed to it; consequently it will make large at one end, and grow ugly." (p. 12.)

By the address to the gardeners of Suffolk, it appears that the author is distinguished as a prize-cucumber grower; and, by his practical critique on Smith's *Treatise* (noticed IX. 692.), that he is not on very friendly terms with one Suffolk gardener, at least. We have no doubt, however, of the author's merits as a practical man; and, as a proof of his own confidence in his success in growing cucumbers, we subjoin a challenge, which, he says, he has made public: viz., that he "will grow six cucumbers against any person in the county of Suffolk, none less than twenty inches, for ten sovereigns." (p. 24.)

Sutton, John, of Fisherton Anger, near Salisbury, Wilts: An Important Discovery for the Destruction of the Turnip Fly; presenting a Certain Method to prevent the Ravages committed on the Turnip Plant by that Insect. 12mo, pp. 24. 10*s.* to subscribers; 12*s.* 6*d.* to non-subscribers.

Mr. Sutton's plan is starvation. He states, that, as soon as the land is turned up and prepared for the seed, the eggs which had been deposited in the ground, and are thus brought to the surface, are vivified by the warmth, and that the fly or beetle is in full action by the time the first leaves appear, according to the ordinary practice of sowing immediately after the land is ready; but that, if the sowing be delayed for a fortnight, and every weed be destroyed as fast as it appears, the beetle will die from starvation in a few days, and the seed may then be sown in perfect safety. He farther alleges that he tried an experiment, by sowing the same seed in earth under ordinary circumstances, and in similar earth which had first been baked in an oven; and that, in the former case, the plants of turnips were destroyed by the beetle, while, in the latter, no beetle appeared. Is it not, as the writer in the *British Farmer's Magazine*, whom you have quoted in p. 80., suggests, too much to concede that the beetle can become hatched from the eggs, and in full exercise of its organs of destructiveness, in the short period which intervenes between the sowing of turnip seeds and the rising of the plants, as Mr. Sutton has advanced that it can and does? — *C. L.*

Purvis, M. A., De l'Agriculture du Gâtinais, de la Sologne, et du Barry; et des Moyens de l'améliorer. 8vo, pp. 168. Paris, 1833.

The author, in company with M. Vilmorin, made an agricultural excursion from Paris through the districts mentioned, in what year he does not state, but we presume it must have been in 1833. They passed the first day at Fromont, examining the horticultural establishment of M. Soulange-Bodin, with which they were highly gratified. Afterwards, quitting the Seine, and passing by Fontainebleau, they arrived at the siliceous plain of table land known as the Plateau de Gâtinais. A few leagues farther, beyond Nogent, they arrived at Barris; an estate of upwards of 1200 acres, belonging to M. Vilmorin. The nature of the soil of this estate (an argillaceous sand) is detailed at length, accompanied by the particulars of several experiments tried upon it by chemical analysis. The kind of culture practised by M. Vilmorin, during the last thirty years, on this estate is next described. Under this head we find that a considerable portion of it is planted with trees of different kinds, European and American; including a number of species of oaks and pines, the cedar of Lebanon, and the larch. M. Vilmorin has made extraordinary exertions to render this tract of poor soil productive; and, possessing, as he does, a scientific knowledge both of agriculture and horticulture, he has been eminently successful. The original price of the land, and its present value, are not given, but we have no doubt of the difference between them being immense, from the improvements it has undergone.

We are glad to find that the Corsican pine (*P*ìnus Larício) grows in the poor soil of M. Vilmorin's estate with extraordinary vigour. Sown where it is intended finally to remain, it has, in eight years, attained the height of twelve feet; having grown eight feet during the last three years. This tree, in Corsica, M. Vilmorin states, grows to the height of 150 feet, and would make excellent masts for ships, were not its timber rather too ponderous for that purpose. (p. 78.)

Poiteau, A., and Vilmorin: Le Bon Jardinier, Almanach pour l'Année 1834. 12mo. Paris, 1834.

A new edition of this excellent work continues to be published annually; preceded by a short notice of the principal improvements of the past year. There is scarcely any thing in the notices which precede the present edition that is not already well known to the English reader; unless we except a new variety of winter wheat with reddish flowers, said to be very productive; viz., *Froment blanc d'hiver à fleurs rougeâtres* (*T*ríticum cándidum). We should suppose that this variety may be obtained of M. Vilmorin and Co., Paris.

Nees von Esenbeck, Th. Fr. Lud., Phil. et Med. Doctore, &c.: Genera Plantarum Floræ Germanicæ Iconibus et Descriptionibus illustrata.

Of this excellent work, whose scope and character we have made known in IX. 451., the second fasciculus has just reached us. The genera illustrated in it are, *T*ỳpha, *S*pargànium, *Á*corus, *C*álla, *Á*rum, *J*úncus, Lùzula, Triglòchin, Scheuchzèr*ia*, *V*eràtrum, Tofièld*ia*, *S*mìlax, *R*úscus, *A*spáragus, Convallària, *P*olygónatum, Maiánthemum *Wiggers*, Stréptopus, Pàris, and *T*àmus.

Prince, Robert William, Author of a "Treatise on the Vine, &c.;" aided by *William Prince*, Proprietor of the Linnæan Botanic Garden and Nurseries: The Pomological Manual; or, a Treatise on Fruits; containing Descriptions of a great Number of the most valuable Varieties for the Orchard and Garden. In two Parts, 8vo, Part I. pp. 200, and Part II. pp. 216. New York, 1832. (See IX. 612. and 354.)

This work, we have no doubt, is found of considerable use in America; and to cultivators in this country, who, like Mr. Saul, are fond of introducing American fruits, it will also afford gratification. Most of the varieties enumerated in Mr. Prince's work are, we believe, in the collection of the Horticultural Society's garden at Chiswick, and we therefore leave their merits to be determined, in due time, by Mr. Thompson there. It is rather to be regretted than otherwise, that there should be, among many nurserymen and cultivators of fruits, a greater desire for novelty than for excellence.

Our readers will recollect that we gave a notice of Mr. Prince's work previously to its appearance (in IX. 612.); and also that there is another work on American fruits, entitled Kenrick's *New American Orchardist*, reviewed in IX. 354.

ART. II. *Literary Notices.*

DR. LINDLEY's *Lady's Botany* is now in the press. It will form an 8vo volume, and be illustrated by numerous plates. It is intended that this work shall be a familiar introduction to the natural system of botany, on the model of Rousseau's celebrated Letters.

Hints on Landscape-Gardening (Andeutungen über Landschaftsgärtnerei), with an account of their practical application at Muskau, is announced by a bookseller at Stuttgardt as about to be published. The author is Prince Pückler-Muskau. The work is to appear in monthly 8vo numbers, at about 15*s.* sterling each to subscribers, and 20*s.* to non-subscribers. It will be illustrated by 44 views and 4 plans, many of them coloured, and will contain a description of the park of Muskau. The whole, it is calculated, will be completed in 10 numbers. Subscribers in England may send their names to Richter and Co., Soho Square. We shall give the essence of each number, as we receive it, in this Magazine.

MISCELLANEOUS INTELLIGENCE.

Art. I. *Foreign Notices.*

FRANCE.

Paris, Feb. 3. 1834. — The prefect of the Seine has kindly permitted the Horticultural Society of Paris to have a part of the Town Hall, for a winter exhibition of flowers and fruit; and accordingly one is to be held on the 27th of the present month, which will last till the 2d of March. It is expected that this show will be very brilliant. The weather has been uncommonly mild here: georginas, nasturtiums, mignonette, and many other summer and autumnal flowers were in full beauty in November; and the eccremocarpus [Calámpelis scàbra], and the lophospermum [L. erubéscens] remained in blossom during December. Towards the end of the month, the crocuses, violets, Christmas rose, winter aconite [Eránthis hyemàlis], snowdrops, and many other early flowers, came into bloom; and in January the almond trees, hyacinths, and tulips began to open their flowers. Altogether, the season has been a most extraordinary one; and, even in December, when sitting under the warm circular wall in the Gardens of the Tuileries, and looking down the garden, it was scarcely possible not to fancy ourselves in spring.

Our horticulturists have been busy lately trying experiments on the culture of the potato; the English root, as it was called only a few years ago pretty generally throughout France, and which the gourmands of the French provinces are only now beginning to consider fit for any thing but for feeding pigs. The Parisians know better; and so many potatoes are eaten in Paris, that, some years ago a market was established expressly for this root; and this market is now one of the largest, if not the very largest, of the vegetable markets in Paris. Apropos of culinary vegetables, M. Vilmorin has just introduced a new kind of spinach, with leaves as large as those of a lettuce [our Flanders spinach, we presume]. This variety, which was originated near Lille, is very warmly recommended.

It has been discovered that the name Beurré rance, given to one of the Flemish pears, is quite a mistake. The discovery has occasioned a good deal of laughter among the horticulturists of Paris; and, thinking it may amuse you, I will tell you all the story. It appears that the pear was originally brought from the commune de Rans, in Hainault, and there is no doubt but the name ought to be Beurré de Rans; instead of which, it is called rance, a word which signifies rancid or rank-tasted, like stale butter, and which, of course, becomes ridiculous when applied to a pear.

I was very glad to see, in the *Bon Jardinier* for 1834 [see p. 155.], a cut and description of the marked tallies given in your *Hortus Britannicus.* I think this mode of marking tallies excellent, and well deserving of imitation in France, though, for my own part, as I am very stupid at either learning or remembering any thing new. I like your Roman method [VIII. 32.] much better; on the same principle that I prefer plain writing to short-hand; though the comparison is not quite correct, as short-hand has the advantage of taking up less time; while one would be as long in making the hieroglyphics as the plain figures; nay, perhaps longer, as the hieroglyphics would require us to think and recollect, and be particular in the shape and position of the lines and dots, &c., which the others do not. — *P.*

GERMANY.

Munich, July, 1833. — I know not whether, during your stay here, you observed the great meadow before the town, where what is called the October festival is held. This meadow is enclosed on the west by a range of gentle acclivities, disposed somewhat in the form of an amphitheatre. Every year, in October, a great multitude of people from all parts of the kingdom assemble at this festival, which was established by the Agricultural Society, for the exhibition of agricultural produce, and for the granting of premiums to the producers of objects worthy of reward.

Those farmers who distinguish themselves by their agricultural labours, or by the quality and genuineness of the breed of their horses, bullocks, sheep, and pigs, receive publicly, from the hands of the minister for the home department, and in the presence of the king and the whole court, the prizes previously awarded to them by the decision of agricultural judges. Public games and horse-races are connected with this solemnity. Thus, besides the great utility of this annual festival in encouraging and improving agriculture, it affords to the mere spectator a most pleasing spectacle and much genuine enjoyment. On these amphitheatre-like heights, where the Bavarian people, like the ancient Greeks at the Olympic games, annually assemble, a picturesque plantation has been laid out by order of the king. This plantation is to serve as an enclosure and background to a building, which is to have the character of a monument, and in which the busts of eminent national artists and men of letters will be placed. The plantation is in the natural style of landscape-gardening; and, though it is as yet of little height, it has a very picturesque effect, which will be greatly increased when the architectural objects are finished.

I must also mention that our beautiful English garden, a plan of which I have sent you, is about to receive a new and magnificent ornament. The first grand view of the garden, or that which is seen on entering as you come from the town, has hitherto, notwithstanding all the natural beauty produced by the simplicity of the planting, been felt to want a suitable architectural object, to serve as a resting-point for the eye of the spectator. This object our monarch's love of art is now about to supply. A circular temple of red marble, 54 ft. high and 23 ft. in diameter, will soon adorn this fine garden scene. The grand effect of this temple will be greatly increased by its site. It is to be erected on a hill of considerable height, formed, indeed, by art, but in the true style of natural gardening. Here, the eye of the delighted promenader will enjoy, not only a view of this beautiful garden scene, with the waterfall and the river in rapid motion below him, but also of the city, with its lofty towers, in the background; and, looking over the city, he will have, in the distant south, the prospect of the majestic chain of the Tyrolese Alps.

Full three years must yet elapse before this grand garden scene can be finished. If you should visit Munich after that period, you will see it in a complete state, and I hope you will be pleased with its execution. I am always yours.—*Sckell.*

Stuttgardt, Oct. 6. 1833.— Sir, Not having succeeded in getting employed as a court gardener, another young man and myself have resolved on commencing business as nurserymen. I have bought a piece of ground in the neighbourhood of Friedericksthor, which, in point of soil, shelter, and locality, is well adapted for our purpose. Here I hope that we shall by and by be able to show one of the first nurseries in Germany. We shall have an arboretum, and a scientific arrangement of herbaceous plants, and my partner will give lessons in botany. I have published a translation of Dr. Lindley's *Outlines of the Principles of Horticulture* (*Hauptgrundsætze des Gartenbaues, &c.; von John Lindley; aus dem Englischen von Wilh. Hertz.* 12mo. Stuttgardt, 1833.), a copy of which I beg you to accept; and my partner and myself intend commencing, in spring, a weekly or monthly *Gardener's Magazine*. We shall establish a garden library, and take young men as apprentices or pupils, whom we shall engage to instruct in every thing that relates to gardening and botany.

But, as we have a great deal to struggle with, I must entreat your assistance, and that of all my other kind friends in England. We shall be happy to receive books, seeds, plants, cuttings, bulbs; in short, every thing that you can spare, and whether the works or other articles be considered in England new or old. I shall always be happy to send you some gardening books in return, and I expect very soon to forward to you a copy of a new edition of Walter's *Gartenbuch*, very much augmented, and adapted to the present state of the science, which I am now passing through the press. Any thing which you, or any gardener who is kind enough to befriend us, may have to spare, may be sent to Messrs. Nebinger, Bange, and Co. London. I remain, Sir, yours sincerely, — *Wm. Hertz.*

AUSTRALIA.

Sydney, August 10. 1833.— It was only the other day that I got your letter of 1829, by the hands of your correspondent, Mr. Frederick A. Meyer. I was out of town when he arrived, in 1830, and he went immediately up the country on an engagement of three years. Meyer has succeeded in establishing several vineyards, from which wine and raisins have been made. The colonists have now caught a fever for vineyards, and they are in course of preparation all over the country. Meyer has got some land on advantageous terms, and is planting on his own account. I hope he is now in the road to wealth; at least it should be so, for to his practical knowledge and enthusiasm may, in a great measure, be attributed the spirit that now pervades the colonists on the subject of vineyards. One gentleman, a Mr. Manning (see II. 368.), is forming, under Meyer's direction, a series of terraces around a sand hill, for a vineyard, which will cost 800*l.* or 1000*l.* — *John Thompson.*

Botanic Garden at Sydney.— In order to give an idea of the value attached to botany and natural history in this colony, we give the following estimate of the expenses of the botanic garden, and the colonial botanist, Mr. Robert Cunningham, late of Kew, with the remarks on it of a newspaper editor:—

	£	*s.*	*d.*
Colonial botanist - - - - - -	200	0	0
Assistant ditto - - - - - - -	80	0	0
Overseer and gate-keeper, at 8*d.* each per diem -	24	6	8
Two collectors of specimens in the interior, at 16*l.* each per annum - . - - -	32	0	0
Rations and clothing to 30 prisoners of the crown, and three apprentices, at 6*d.* each per diem - -	301	2	6
Forage and farriery for two cart horses - - -	26	1	10
Tools, implements, and incidental expenses - -	101	7	8
	£764	18	8

This is a large sum to pay for the science of botany. We have the same objection to this establishment as to that of zoology. Zoology, and mineralogy, and astronomy, and botany, and other sciences, are all very good things; but we have no great opinion of an infant people being taxed to promote them. An infant community cannot afford to become scientific for the benefit of mankind. If old rich countries want local information in science, let them send their travellers to us. Public establishments in science are very apt to degenerate into jobs, though we say not this of our present colonial astronomer or botanist. We think highly of the talents and industry of both. Still, we are not for taxing a young colony for the promotion of science. Let our rich men promote it by private subscription. In America, such taxes have only become common of late years. They were two centuries old before they agreed to spend their money in this way. We must, first of all, people the country; we must build houses, and enclose farms, and dig wells, and make tanks, and dams, and reservoirs, and irrigate our lands, and procure all the necessaries of life, before we can spare money for the sciences and fine arts. We might as well give salaries to painters, sculptors, and chemists, as to botanists, astronomers, and museum collectors. (*Sydney Monitor*, July 20. 1833.)

Art. II. *Domestic Notices.*

ENGLAND.

A Scheme for a Metropolitan Garden Society and Benevolent Fund was proposed to us, two years ago (VII. 689.), by Mr. Ramsay the nurseryman, and has lately been laid before us more in detail by a most enthusiastic and intelligent gardening amateur. We do not publish this scheme, because, on due consideration of the rapid changes which are taking place in society (we allude particularly to the projected municipal system), we think several parts of the plan are objectionable. For instance, we decidedly disapprove of charitable provisions of any kind being made for healthy able-bodied men or their children. One part of the scheme submitted to us was to educate the children of gardeners; but we see no good that could result from educating the children of this class at the expense of a society, since it would in the end be merely saving the pockets of those who employ gardeners. A national system of education will, we trust, soon set all questions on this head at rest. We dislike, also, the idea of looking to the patronage of persons of title, merely as such, for the main support of any institution whatever. The time is gone by for any other patronage than that of the public generally. When the metropolis is once governed as a whole, it will soon have a metropolitan garden, supported, like other metropolitan institutions, at the general expense. In the mean time, rather than see any new garden establishment of the kind proposed, we would wish that of the Horticultural Society to be better supported, and even assistance advanced to it by government, as in the case of the Edinburgh gardens. (p. 62.)—*Cond.*

A General Cemetery, of 52 acres, is projected at Notting Hill, near Bayswater, by J. F. Carden, Esq., who was the first to bring forward, in an effective manner, the idea of public cemeteries in England, in 1824. Since that time nine general cemeteries have been established in different country towns. We dislike the idea of cemeteries and botanic gardens being made private speculations, and would have them formed and maintained at the expense of the municipal societies under whose government they were situated; but we suppose the time is not yet arrived for this state of things.

A Bazaar for the Sale of Plants in Pots, and cut Flowers, is about to be opened in the Pantheon, Oxford Street, London. The Pantheon is an immense building, which, for nearly 30 years, owing to some peculiar circumstances in the tenure by which it was held, has been unoccupied. It has now, however, become the property of some persons of capital, and of great spirit and taste, who are remodelling the entire premises, so as to render it one of the most splendid bazaars in London. Among other departments, there is a saloon, exclusively devoted to the exhibition of pictures and statuary, which will be open to the public gratuitously; a new and most valuable feature. There will also be a conservatory for the reception of plants for sale. This building, which forms an entrance to the bazaar from Marlborough Street, will be 85 ft. long, 25 ft. wide, and about the same height. The roof is curvilinear, of iron, and glazed on all sides. It will be heated by hot water, and the side sashes will open for ventilation. It is proposed to range along the two sides of this conservatory a series of small stages, and to let out the ranges at so much per foot frontage. The price mentioned to us by Mr. Walker, one of the proprietors, is so remarkably low, and the chances of sale, in a place which from 10,000 to 15,000 persons will probably pass through daily, so great, that we should think nurserymen and other growers of plants would find it well worth their while to send here some of their handsomest specimens. The architecture of the conservatory, which is by Sydney Smirke, Esq., is in the Indian Gothic style, and very handsome and appropriate. Mr. Smirke has favoured us with some sketches, which we shall probably engrave at an early period. A plan, and farther particulars of the other parts of the building, will be found in our *Architectural Magazine*.

The Stamford Hill Horticultural Reading Society, established Nov. 6. 1833.

— The objects of this Society are, to advance knowledge in the various departments of gardening, farming, forest planting, natural history, and rural economy, by the circulation of books; and by establishing a reading-room, in which the subscribers can meet on certain evenings to peruse any books then in the library, and to introduce a visiter upon payment of a stated sum: it will also serve to bring together those subscribers who wish, by information afforded to one another, or by bringing specimens of plants, &c., to facilitate such knowledge. These advantages, which can rarely be attained by any single individual, even at a great expense, may thus be placed within the reach of the whole Society at a trifling cost. The business of the Society is to be managed by a committee of twelve persons, assisted by a treasurer, secretary, and librarian, all of whom are to be chosen by the subscribers at the annual meeting in January; the other general meetings will be held in April, July, and October. The property of the Society is to be vested in three trustees, to be chosen at the first general meeting. The entrance money is 10*s*., and the quarterly payments 2*s*. 6*d*. Honorary members are to pay one guinea per annum, or to commute for this sum by one payment of five guineas. The rules and regulations, which are 19 in number, have been drawn up and printed. They may be had of Messrs. Low and Co. of the Clapton Nursery. This institution seems a very excellent one, and well worthy of imitation, wherever there are three or four gardeners, and a dozen or two of gardening amateurs. To the latter, the practical man, as he is at present circumstanced, must chiefly look for the purchase of books; because what can a man at work in a nursery, who has only 12*s*. a week, spare for this purpose? The journeyman or apprentice in private service is scarcely better off, and every thing, therefore, in the way of outlay of money, must depend on the master gardeners and amateurs.

Emigration of Gardeners. — A correspondent, under the signature of Gracchus Colonus, recommends Prince Edward Island, in the Gulf of St. Lawrence (which, he says, he knows well), New Brunswick, Nova Scotia, and Cape Breton, as the most desirable parts of North America for gardeners to emigrate to. "These countries," he says, "are wholly free from the fevers, agues, and other distressing disorders, which ravage both the United States and the Canadas; and by going to them, the emigrant avoids the long and tedious land journey, which, in all probability, awaits him if he land either at Quebec or New York. In Prince Edward Island, especially, which was called by the French the granary of Canada, and which contains upwards of 1,000,000 acres, and 40,000 inhabitants, no spot can be fixed upon more than ten miles from the sea. Land, of good quality, may be rented at 1*s*. per acre on a long lease, or the freehold may be purchased at from 15*s*. to 30*s*. per acre. A very able work, on the British colonies in North America, has been published by a Mr. M'Gregor. I do not at all agree with the politics of the author, but, on account of his clear and unvarnished statements, I would recommend his book to the attentive perusal of all who intend to leave this country. [*An Account of Prince Edward Island* has also been recently published by Swale, of Great Russel Street, Bloomsbury.]

"In conclusion, allow me to address a few words to such of my brother gardeners as are hesitating whether they shall emigrate, or stay here. Pray, gentlemen, what is the end you propose to yourselves by your labour? Is it not to acquire independence, if you can; and to leave your children comfortably provided for, but, above all, well educated? If you can accomplish this in another country in a very few years, while there is little chance of your ever doing it here, is it not worth while to remove? If you go to New York, or Quebec, the price of land is nearly as high as it is here; and there is, of course, great competition in trade and business. If you proceed up the country, a trackless wilderness, solitude, and disease, in all probability await you. Is it not better to go to a place where your journey terminates with the voyage, while at the same time land is so cheap that you may either at once, or very soon, establish yourselves and your children in independence and comfort?

"In writing this letter, I am actuated solely by a sincere wish to benefit my brother gardeners. Should you, Sir, think it worth a place in your work, I shall afterwards submit to you a few details, with which it may be advisable that the emigrant should be acquainted.—*Gracchus Colonus. London, Jan.* 16. 1834."

A British Gardener has just returned from the south of Russia, where he has been for two years in the service of a wealthy nobleman. His treatment by this individual was as good as the circumstances of the country permitted; but these circumstances were such as to render it next to impossible for any person, in the capacity of a servant, to enjoy even a tithe of the comforts which he does in every other part of Europe. If this gardener were to publish his journal, or even as much of it as he told us, it would be highly instructive; but we know, from personal experience, that such is the tyranny of the Russian government, and the want of principle among all ranks in that country, that the mere publication of such a journal might injure British gardeners already settled in the neighbourhood of Moscow and Petersburgh. This notice is intended to put gardeners on their guard, and to remind them of what we have stated in the *Encyc. of Gard.*, § 7784. 2d edit., and *Encyc. of Agr.*, § 661. 2d edit.

Mr. Brackenridge, late gardener to P. Neill, Esq., an excellent botanist and cultivator, is engaged as gardener to an eminent banker in Berlin; for which city he left London on March 7. We hope to hear from him frequently.—*Cond.*

Growing Ferns and other Plants in Glass Cases.—We lately (March 6.) had the pleasure of seeing the most extraordinary city garden we have ever beheld, viz., that of Mr. Ward of Wellclose Square, a gentleman enthusiastically devoted to botany. Along the tops of all the walls of his dwelling-house, of the offices behind, and of the wall round the yard, even up the gable ends and slopes of lean-tos, is a continuation of boxes or troughs, about 14 in. wide, filled with soil and divided crosswise by tiles, so as to form distinct compartments about 1 ft. by 6 in., in each of which one species of plant is grown. We should suppose there must be at least room found in this way for 1500 species. The sloping roof of a shed is wholly covered with soil, and divided into compartments by slips of wood; in these compartments sedums, saxifrages, and other succulents are grown. In the open yard there are two or three trees; the best of which, for a London garden, Mr. Ward considers to be the fig. It thrives amongst smoke and dirt, and shows a broader leaf, and of a more intense green, than any other tree; and this either as a standard or against a wall. Next to the fig, the *A*'cer Pseudo-*Plá*tanus is found to be the most prosperous. In the interior of Mr. Ward's house, there are boxes in every window, some on the outside, and others on the inside, containing plants. These boxes are from 8 in. to 1 ft. in width, in length equal to the breadth of the window or its sill, or window seat; and the sides are from 18 in. to 2 ft. in height. About 6 in. of the lower part of the sides, and the bottom, are of wood, put together so as to be watertight; and the upper part of the sides, and the top, are wholly of glass. In the bottom, soil, stones, moss, &c., are placed; and ferns and other plants are planted, and duly watered. This being done, and the superfluous water drained off through a plug-hole in the bottom, which is afterwards closely stopped, the close lid is put on the box, and seldom, or never, afterwards taken off. The plants are found to require no fresh supply of water for months, and some plants will live for years without any; and, as the lid is never taken off, they can have no fresh supply of air, otherwise than by the expansion produced by increased temperature forcing out a portion of air through the imperceptible interstices of the lid; and, when the temperature is reduced, drawing air in, through the same interstices, by its contraction. This, no doubt, will take place more or less every day. The great advantage of admitting air only in this way is, that it is, as it were, sifted, or filtered, from the impurities which float in it; which impurities, and not any thing in its chemical composition, are now generally understood to be the cause why the air of London is less favourable for both animal and vegetable life, than the air of the country. Mr. Ward has grown plants in boxes of this kind for three years with the greatest degree of success; and he is now getting a box prepared, 5 or 6 ft. square, and nearly 10 ft. high, in which he intends to have a rockwork covered with vegetation. In our next Number will be found a paper on this subject, by Mr. Ward: in the mean time, we have, at this late period, only time to state, that the success attending Mr. Ward's experiments opens up extensive views as to their application in transporting plants from one country to another; in preserving plants in rooms, or in towns; and in forming miniature gardens or conservatories, either in rooms or on the inside or outside of windows, as substitutes for bad views, or for no views at all. Mr. Ward has no doubt, that by boxes of this kind, with requisite modifications, he could transport plants from any one country in the world to any other country. In Mr. Ward's drawing-room, we found a magnificent specimen of Meliánthus màjor coming into bloom; and his herbarium contains nearly 25,000 species, arranged according to the natural system, and placed in boxes on a highly improved plan.—*Cond.*

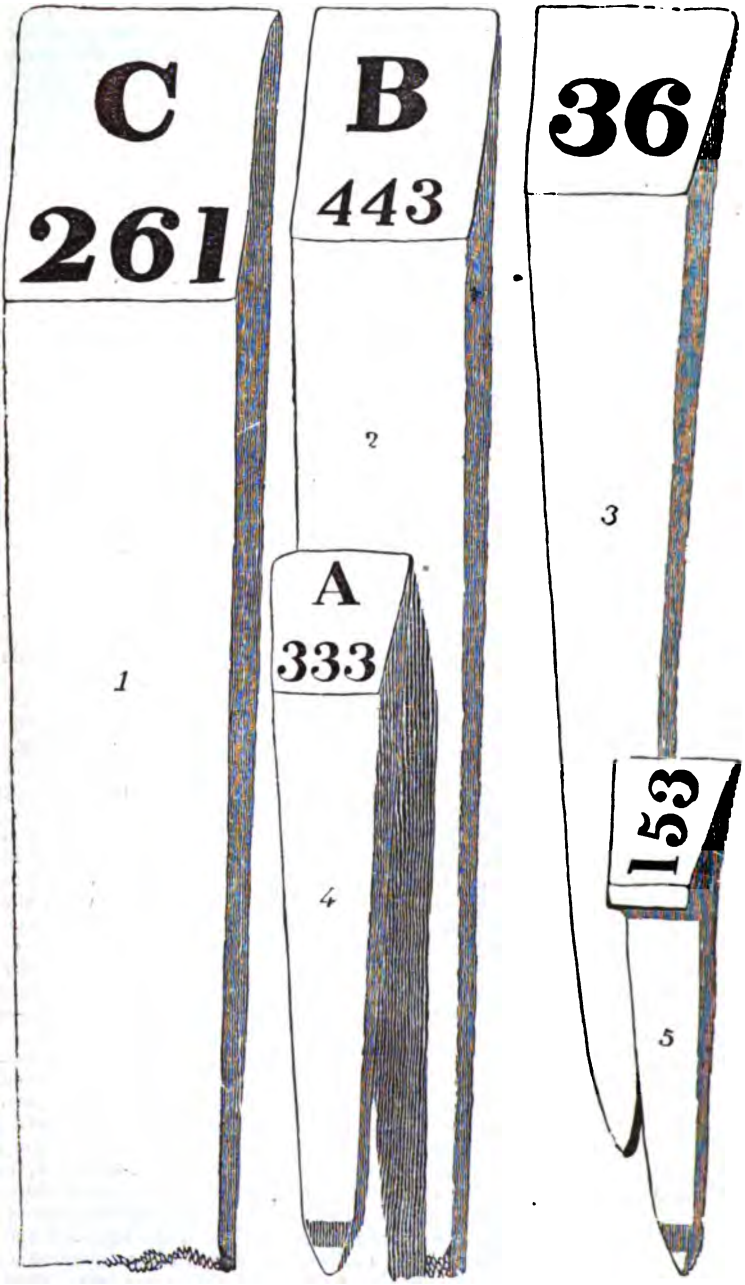
A Smoke-consuming Furnace, formed of bricks, has been invented by Mr. Ambrose Winder of Dale End, Birmingham, which possesses all the good qualities of Witty's patent gas furnaces; and, in addition to this, it costs little more than a common furnace, in the erection and materials. Two of these furnaces have been fitted up in this garden, for heating two narrow houses lately erected for the Society by Mr. Thomas Clark, jun., Lionel Street, which answer well the purpose for which they were intended.—*David Cameron. Botanic Garden, Birmingham, March* 4. 1834.

A great Improvement in the Garden Engine has recently been made by Mr. Read (inventor of the improved syringe, *Encyc. of Gard.*, 2d edit. § 1419.). In consequence of having a reserved power of condensed air, he can throw the water in a fine shower to a much greater distance than can be done by the common engine, and this with much less labour to the operator.—*Cond.*

Catching Moles in the Neck of a broken Bottle.—Take two common beer bottle necks, set them in the burrow with their wide ends outermost, facing the hole both ways; make them firm with a couple of sticks to each, crossing each other over the bottle necks, close to their widest ends; exclude light and air by a piece of turf or the like, and the trap is set. The mole, coming to the bottle-neck, finds the way plain, and squeezes herself in. She would get through, were she able to hold her hind feet on the glass to push her head and fore legs through; but here she fails, and is generally found squeezed in so hard that a stick is wanted to force her out. This mode of snaring was practised, if not invented, by a farmer in Banffshire in the early part of the seventeenth century; and it is likely that, though it might then have been generally known there, it has since been lost sight of in the adoption of less simple though more portable snares. By this means the poorest cottager might ensnare this unwelcome guest in his garden, whilst he might not be able to spare either his pence to buy, or his time to make, any other trap.—*Adolescentulus.*

A new Description of Earthenware Tally (*fig.* 13.) made by Messrs. Doulton and Watts, High Street, Lambeth, promises to be both durable and economical, especially for herbaceous plants, and also for plants in pots. We have given figures of five sorts, each of the full size, except Nos. 1. and 2., which have a portion of their lower ends broken off. No. 1. is 9½ in. long; No. 2. is 8½ in.; No. 3. is 6 in.; No. 4. is 4 in.; and No. 5., for pots, is 2¾ in. The cost of the largest size is, we believe, about 16*s.* per gross; that of No. 2. 12*s.*; of No. 3. 8*s.*; and of No. 5. 4*s.* It will be observed from the engraving, that the numbers are impressed on the beveled surface of the top; and that, over the number, there is a letter in Nos. 1, 2. and 4. The intention of the letters is to enable the enumeration to be carried to an indefinite extent,

13



notwithstanding the circumstance that not more than three figures, or 999, can be got in the width of the top of any one tally. The number 999, however, repeated as often as there are letters in the alphabet, would give upwards of 25,000, which is as many species as are to be found in the open air in any botanic garden in Europe. By doubling and otherwise combining or changing the position of these letters, the enumeration might be carried to almost any extent. The projection in the head of No. 5. is intended to rest on the rim of the pot. The great advantages expected from these tallies are, as we have said above, economy of first cost, and durability. — *Cond.*

The Oxford Botanic Garden. — It is stated in the newspapers that the late Dr. Williams, who was for forty years professor of botany at Oxford, and who, of course, had the general management of the garden, has bequeathed to it 500*l.* Dr. Daubeny, an eminent chemist and physiologist, as well as a botanist, has been appointed successor to Dr. Williams. — *Id.*

Mr. Penny, late botanist in the Epsom Nursery, has joined Mr. Young, of the Milford Nursery near Godalming, which will henceforward be carried on under the firm of Young and Penny. One of the first collections of hardy plants in the country may therefore soon be expected at Milford; and, as a number of new hot-houses and pits have recently been erected there, the collection will not be deficient in house exotics. — *Id.*

Kirk's Nursery, Coventry. — We are happy to find that our correspondent Mr. Kirk, of whom, when we called on him in 1831 (see VII. 411.), we formed a very high opinion, has commenced business for himself. Mr. Kirk was many years foreman to the late Mr. Weare, and, in fact, appeared to us the only man in or about Coventry who really understood the nursery business. He is an excellent practical botanist, a most successful cultivator, and, from information which we have received from some gentlemen in the neighbourhood, we can assert, with the greatest confidence, that he is a good, an honest, and a most industrious man. He has also been very ill used by his late employers, Weare's successors. Most sincerely do we wish him success; and we entreat all our brother gardeners in that part of the country to enter into our ideas on the subject. Let every one only imagine himself in Mr. Kirk's situation. — *Cond.*

The celebrated Collection of Orchídeæ which belonged to the late Mrs. Arnold Harrison of Liverpool was purchased by Mr. Knight, Exotic Nursery, in the beginning of February last. — *Id.*

Plants in Flower, at Shortgrove in Essex, on January 31. 1834. — Sir, The extraordinary mildness of the present winter, it is likely, will cause some of your correspondents to make their observations upon vegetation, the progress of which, in some species of plants, has, perhaps, never been paralleled at this season of the year. I herewith transmit to you the names of a few; they are such as have come under my notice at Shortgrove, where the soil is by no means favourable to early vegetation, nor is the situation in any wise conducive to the promotion of premature growth.

*C*érasus *L*aúro-*C*érasus (common laurel), *L*igústrum lùcidum var. floribúndum (Chinese privet), wallflower, crocuses in variety, snowdrops, Kérr*ia* japónica, *R*òsa semperflòrens and índica mìnor, Cheiránthus mutábilis, anemones, polyanthus, *A'*rabis alpìna, hepaticas, narcissus, sweet alyssum, marigolds, periwinkle; *C*hrysánthemum sinénse, several varieties; common yew (*T*áxus baccàta), *P*hillýrea latifòlia, sloe tree (*P*rùnus spinòsa). Calámpelis scàbra is beautifully in flower in a garden at Saffron Walden. Filberts are in bloom, their catkins decaying, or fallen off. Gooseberry bushes partially in blossom, with fruit as large as sweet peas. *Pæònia Moútan* and *M. pa*paveràcea, with flower-buds the size of large cob nuts. *S*ambùcus nìgra (common elder) in leaf. I am, Sir, yours, &c. — *T. Rutger. Shortgrove, Jan* 31. 1834.

Plants in Bloom at Bury St. Edmunds, and other Parts in the East of England, early in December, 1833. — The hawthorn was in bloom in the picturesque grounds of the Rev. Edw. Mathew, Pentlow Hall, Cavendish, Suffolk; an entire branch, of considerable length and great beauty, overhanging a rivulet among other old deciduous trees. It would be endless to name the plants and shrubs which displayed their unusual but interesting beauties during the extraordinary season up to January, 1834. At East Cliff, Ramsgate, the superb seat of Moses Montefiore, Esq., the laburnum and lilac were in flower at the end of December, and the pelargoniums blooming freely in the clumps. On my return to the botanic garden which I have established in the Abbey Grounds, Bury St. Edmunds, Eránthis hyemàlis and Cròcus biflòrus were in bloom, with Sálvia fúlgens, Hepática tríloba, Cýclamen còum, Prímula vèris, and several species of *Narcíssus.* — *N. S. Hodson. Abbey Grounds, Bury St. Edmunds, Jan.* 1834.

The Prímula vulgàris was in flower here on Nov. 18. 1833; and the Eránthis hyemàlis on Dec. 4. 1833. — *W. T. Bree. Allesley Rectory, near Coventry.*

A friend has remarked to us that the crocuses have this spring flowered less vigorously and less satisfactorily than after winters whose severity and length had given them a considerable period of absolute repose. He instanced several species of plants whose habit is to display their flowers or leaves in early spring as being in the same case. This is likely; as incessant excitement must abate energy. Plants in every region, even in tropical ones, experience a season of rest; and, it is assumed, when they resume their growth, proceed with such an increase of effectiveness, as compensates for the interval of inertness. — *J. D.*

Magnòlia conspícua. — This charming tree is now magnificently in bloom in Messrs. Chandler's nursery, both in pots under glass and in the open garden. A fine specimen, in a pot, was exhibited at the Horticultural Society's meeting, on March 4., when it was stated to us that the number of blooms open at one time in the nursery, the day before, was estimated at 18,000. Why this tree of white tulip-like flowers, now so cheap, should not be more common, we are utterly at a loss to understand. It will grow even in the smoke of London. — *Cond.*

Bérberis A*quifòlium* Ph., *Mahònia* A*quifòlium* Nutt. — This truly beautiful, and as yet rare, hardy evergreen shrub has been for the last six weeks beautifully in flower in the Chiswick Garden. It is a plant worth its weight in gold; and nurserymen ought to endeavour to get hundreds of it from Philadelphia. Another beautiful *Bérberis* has lately been introduced by Mr. Knight of the Exotic Nursery. — *Id.*

Arboretums, we are happy to find, are gradually rising up in the private grounds of gentlemen in different parts of the country. Near Theobalds, in the grounds of William Harrison, Esq., F.R.S., there is one said to contain as complete a collection of the genus *P*ìnus as the pinetum at Dropmore; and at Somerford, near Wolverhampton, in the grounds of Edward Monckton, Esq., there is a collection of thorns said to comprise upwards of seventy species and varieties, besides all the species and varieties of other hardy trees and shrubs which have of late years been purchasable in the nurseries. There is an arboretum forming at Wardour Castle; one at Leigh Park near Havant, the seat of Sir George Staunton; and several, we are informed, in the northern counties of England, of which we should be glad to have accounts. This is a sort of improvement which we like very much to see going on. When we consider the number of trees and shrubs in the temperate regions of Asia and South America, independently of North American trees and shrubs, which remain to be introduced into the country, the mind is lost in admiration of what must be the ultimate richness of our woody scenery. On the other hand, it is interesting to contemplate the result of transplanting the trees and shrubs of the temperate regions of Europe into the temperate regions of every other part of the globe. Nature has given to every particular country some peculiar product; and it is for civilised man to collect, improve, and equalise these products in every country, subject only to certain limitations of climate. In everything which regards civilisation and refinement, the ultimate tendency is to equalisation. — *Id.*

Art. III. *Calls at Suburban Gardens.*

We introduce this article occasionally, chiefly for the sake of showing that we are unceasing in our endeavours to procure information respecting all that is going on in the gardening world.

Nov. 14. and 15. — Called upon professionally to visit the neighbourhood of Greenhithe. We were much gratified by the appearance of the cottage gardens by the roadside; in which the chrysanthemums were in fine bloom, together with georginas, China roses, French and common marigolds, and, owing to the mildness of the weather, many other flowers not usually blossoming at this season. Near Shooter's Hill, we had the pleasure of seeing the neat and economical double cottages, with 2½ acres of land laid to each, built by our correspondent, William Bardwell, Esq., architect, and figured and described in our *Encyclopædia of Cottage, Farm, and Villa Architecture*, § 477. We were much gratified with their substantial and architectural appearance; which was the more striking when contrasted with the rude hovels erected around them by the occupants; as pigsties, sheds for fuel, &c. Passing our friend Park's nursery, we observed many good things in it, and an appearance of order and neatness throughout. At a short distance beyond Dartford, a piece of ground is now being laid out under the direction of our gifted architectural correspondent, E. B. Lambe, Esq.; a plan of which we hope, one day, to lay before our readers, as a specimen of the economical distribution of a number of cottage villas over a very limited space. This space, being full of inequalities, affords a fine exercise for the ingenuity of the artist. The boundary of no one villa will be seen from its windows, while all of them will have a distant prospect of the Thames, and of the Essex coast beyond. Respecting the grounds which we were called on to look over, we shall say nothing at present, farther than that they display one of the most striking instances of the effect of contrast that can well be imagined. From one part of the house, which is placed in an elevated situation, is seen an extensive prospect up the Thames; and from the other we look down a precipice into a wooded glen, of four or five acres, the sides of which are of chalk rock, upwards of 100 feet high, and crowned with lofty woods. We hope, by and by, to do justice to this place, and to the ingenious young architect, Charles Morring, Esq., who is erecting a beautiful Tudor villa, in Portland stone, for the proprietor. It is seldom that we find so much taste in those who profess at once to be architects and builders; but the progress of architecture and building will, we believe, lead to the blending of both professions; at least, with regard to all buildings of moderate extent; in the same manner that, in a few years, most head gardeners will be landscape-gardeners.

Passing *Messrs. Cormack and Sinclair's Nursery*, on our return, we were gratified by observing the deep reds, purples, and yellows of the still remaining leaves of the oaks, acers, birches, sorbs, thorns, liquidambars, and other American trees, which we are so anxious should be introduced in every park and pleasure-ground.

Nov. 27. — *Colville's Nursery.* The principal articles in flower were, chrysanthemums, Amaryllídeæ; some forced polyanthus narcissuses, and heaths; Oncídium flexuòsum, which has been in flower for several months, has now a stem 11 ft. in length. Several other orchideous epiphytes are swelling their seed-pods; and the seeds of others, ripened and sown in the same house, are now germinating. The milk tree (Galactodéndron ùtile *Hum.*) is in a thriving state, about 2 ft. high; and the stem, when very slightly pricked, gives out abundance of milk.

Knight's Exotic Nursery. Mr. Knight has just returned from a tour in France and the Netherlands (p. 7.); where he purchased various new and valuable articles. The Chinese azaleas (IX. 474.) are in a thriving state, and many of them have formed blossom buds, as have the tree rhododendrons, all of which will make a splendid show in the spring. In the stove, Mr. Scott pointed out to us that the dependent fibres from the epiphytes all pointed to the nearest wall, except when they were fixed to a pot or a piece of wood; in which case they adhered to the solid material. The cause of their pointing to the wall, Mr. Scott supposed to be the principle of attraction of gravitation.

In the Fulham Nursery, the fine large specimen of the Fulham oak (which is the original tree) still retains all its leaves, and these continue to be of a deep green colour, while the American oaks have lost their leaves. The *Arúndo Dònax*, or Italian reed, has here withstood the last three winters, instead of dying down to the ground, as is generally the case when the weather is very severe. The plant now presents a series of bamboo-looking rods, from 5 ft. to 15 ft. in height, having altogether a very Oriental appearance. We would strongly recommend this reed as a lawn plant, for appropriate situations, in extensive grounds, or for adding to the interest of those *multum in parvo* gardens which are generally found in suburban streets. In these latter gardens, appropriate situations are out of the question; they are more to be considered as museums of living plants; since within a plot of a few square yards may frequently be seen the cedar of Mount Libanus, the swamp cedar, the rhododendron of North America, the yucca from the same country, and the aucuba, and cydonia of Japan, the lilac of Persia, with the arbutus of Ireland and Italy, &c. This is all very proper, and consistent with the idea of every ornamental garden being a museum of greater or less extent, according to the space it affords and the means of the proprietor.

The Villa of Horsley Palmer, Esq., at Parsons Green, Fulham. Mr. Perkins's mode of heating by hot water, adopted here in 1831 (see IX. 202.), continues to give perfect satisfaction. The houses were in beautiful order, and, with the conservatory at the mansion, exhibited a splendid display of chrysanthemums. Several camellias were in flower, including Press's eclipse. Canarìna Campánula, trained in the form of a cone to the height of five feet, displayed a great many of its bell-shaped flowers, terminating the lateral shoots like the bells of a Chinese pagoda. This most elegant plant is too much neglected. When well cultivated, it is capable of being rendered an object of very great beauty and also one of curiosity. We intend to revisit this place in the spring.

Clarenoe Lodge, —— Hodgson, Esq. The conservatory is, as usual, in beautiful order, and very splendid. Some of the acacias form large and handsome trees, and will soon be covered with bloom, which they will retain all the winter. The view from the garden front of the house, over a valley, is agreeable; but the system of walks on that side is not good, and every thing on the entrance front is, in our opinion, decidedly bad.

The Hammersmith Nursery. Upwards of forty varieties of chrysanthemums are in bloom, but none of them luxuriantly so. Various reasons prevented Mr. Cornelius from attending to them sufficiently, but he has promised to produce a very superior display next season. Chimonánthus fràgrans, on a western exposure, is thickly covered with blossom buds, many of which are already expanded, and perfume the air for some distance round. It is perfectly astonishing to us, that, after all which we have said in favour of this plant, it should be so little known and cultivated. It is as hardy as the common privet, and therefore ought to be in every street garden; whereas it is not in one in five thousand. One plant, trained against a house in the way that vines, jasmines, and the Virginian creepers commonly are, would remain in bloom from December till March, supplying blossoms for perfuming the rooms within, every day during that period. When the chimonanthus ceased flowering, perfume might be supplied by pots of hyacinths, violets, or mignonette; while Caprifòlium itálicum and chinénse (Lonícera flexuòsa), the flowers of the latter of which are among the sweetest of the English gardens, come into bloom in May, and continue till September.

Art. IV. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly Number containing eight plates; 3*s.* 6*d.* coloured, 3*s.* plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly Number containing eight plates; 4*s.* coloured, 3*s.* plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Sweet's British Flower-Garden; each monthly Number containing four plates; 3*s.* coloured, 2*s.* 3*d.* plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

Transactions of the Horticultural Society of London. Second Series. Vol. I. Part V. 4to. Pages 343. to 418. London, 1834.

Facts and Considerations which have a general Relation to Floriculture.

Species of Plants, new to Britain, received from South America by the London Horticultural Society, from their Collector, Mr. David Douglas, during the Years 1831, 1832, 1833. — In the recently published part v. of the Society's new series of their *Transactions* there is a report, by G. Bentham, Esq., the secretary, "on some of the more remarkable hardy ornamental" species which have been received within the time stated, and a notice of some of the circumstances which have directed Mr. Douglas's researches. For the latter, see the report in the *Transactions.* Of the plants enumerated in the report, the following had been previously, from time to time, published in the *Botanical Register,* and have been notified to our readers; namely, *L*upìnus rivulàris, Clárk*ia* élegans, Calandríni*a* speciòsa, Œnothèra densiflòra, *Màdia* élegans, Stenáctis speciòsa, Nemóphila aurìta, *M*ímulus ròseus, Calochórtus lùteus, Callipròra lùtea, Hesperoscórdon lácteum, and several species of *P*olemoniàceæ. For the names of the last, see our IX. 705, 706. In addition to these, the report communicates the characteristics and names of several species not previously described; figures are added of six of them. Of all of these we have transcribed short notices into our following two-monthly catalogue. A second report, it is stated, of additional species of plants raised from seeds transmitted by Mr. Douglas, will shortly be laid before the Society.

An Instance of the Economy which is observable in every Part of Nature. — "*P*ỳrus crenàta *D. Don* is found naturally in the highest of the mountainous parts of Northern India, from an elevation of near 12,000 ft. downward to 9000 ft., and lower. Nature seems to have intended it to brave the utmost inclemency of climate; for, in its own country, in the earliest spring, the leaves, while still delicate and tender, are clothed with a thick white coating of wool; and the flowers themselves are so deeply immersed in an ample covering of the same material, as to bid defiance to even Tartarian cold. But in proportion as the extent of the distribution of the plant descends towards the plains, or as the season of warm weather advances, it throws off its fleecy coat, and at length becomes as naked and as glittering with green as the trees which have never had such rigour to endure. In England it scarcely acquires any part of its natural woolliness, but is as naked as our common beam tree." (*Dr. Lindley,* in *Bot. Reg.,* t. 1655., March.) The leaves of the *Æ*'sculus Hippocástanum, while enfolded in the bud, are plentifully invested with wool, which is absent when the leaves have become expanded. Pubescence is deciduous off the young leaves of the beech tree and those of many plants: it seems also, in exotic pubigerous plants cultivated in Britain, variable, according to the dryness or moistness of the season, in the quantity developed.

The University Botanic Garden, Göttingen. — From our friend M. C. A. Fischer, the inspector of this garden, we, on March 9., received a packet of seeds; two copies of the *Index Seminum Horti Academici Göttingensis,* 1833;

and a communication, dated Feb. 3. 1834, from which we transcribe the following information: — "I now have the pleasure to send you some seeds for one of your friends, if you do not make use of them yourself. It would be very agreeable to me to have some additional correspondents, through whose services, reciprocated by mine to them, our garden might be benefited. I send two copies of our *Index Seminum* [or catalogue of seeds offered in exchange], from which any friend can choose out the species he desires. Seeds, whether imported or ripened in Britain, of any new or interesting plants, will be welcome; as likewise any thing new of an agricultural description. Our botanic garden has been extended by the addition of ten acres, and part of this space will be appropriated to the plants of agriculture; so, you see, that any thing new will be of great importance..... Send all letters to the Hanoverian Office, Duke Street, Piccadilly."

The seeds received we have sent to our friend Mr. George Penny, (late botanical cultivator in the Epsom Nursery, now) nurseryman, Milford, near Godalming, Surrey; who, we doubt not, will prove a correspondent of great value to our friend M. Fischer. Some of the seeds in the packet bear names additional to those published in the *Hort. Brit.* and in this Magazine; and, as it is probable that plants will be raised from most of them by Mr. Penny, and that the species will thus be added to the British national collection, we take this timely opportunity of registering the names of the species seemingly not before in cultivation in it. Before we do this, however, we may just express our admiration of a plan which is adopted in the *Index Seminum:* that of giving, in footnotes, at the bottom of the columns of names, the characteristics of those species, mingled amongst the rest, which Schrader, the botanical professor at Göttingen, has described and denominated: —

Achyránthes uncinulàta *Schrad.* ■ or ■ C. G. H., Syn. *P*aronýchia capénsis *Eckl.* [This is described in the *Index*]; Achyropáppus schkuhriöìdes H. Ber. ○|; *A*conìtum ochránthum *Led.* △; *A*párgia vérna *Salzm.* ○; *A*'rabis declinàta *Schrad.*; *A*'rabis *lilácina* Schrad.; Archangélica decúrrens *Led.* △; Arenària stenophýlla *Led.* △; *A*rtemísia aprica *Led.* △; *A*'triplex crassifòlia *Led.* ○; *A*vèna pulchélla *Link*, ○; *Bérberis* mìtis *Schrad.* ■ [described in the *Index* as a dwarf much-branched shrub from North America; with simple oblong oval leaves, serrulate towards the apex; and with dark purple berries]; *B*étula grándis *Schrad.* † [described in the *Index* as assimilating closely to *B.* papyràcea: it is from North America]; *B*upleùrum multinérve *Dec.* △; Calandrínia discolor *Schrad.*; *C*ardámine nasturtiàna *Bert.*; *C*árduus myriacánthus *Salzm.* ○; Ceratóchloa péndula *Schrad.* ○; Chardínia xeranthemöìdes *Desf.* ○; Chenopòdium chilénse *Schrad.* ○; Chenopòdium hircìnum *Schrad.* ○ [in the *Index* it is stated to be a species from Brazil, with a leaf like that of *o*pulifòlium, but larger; that it is from 4 ft. to 6 ft. high; and has the odour of C. ólidum]; Cinerària gibbòsa *Guss.* △|; *C*lématis *l*athyrifòlia *Bess.* △; *F*érula sulcàta *Desf.* β campéstris △; Goldbàch*ia* torulòsa *Dec.* ○; Gymnóstyles pterospérma *J.* ○|; Gypsóphila stricta *Bung.* △; Leonùrus glaucéscens *Bung.* △; *L*epídium Gussòni Schrad. ◑, Syn. *T*hlàspi pubéscens *Guss.*; *L*ýchnis pusílla *Lk.* △|; *M*elilòtus hamòsa *Bess.* ○; Monólepis trífida *Schrad.* ○; *N*astúrtium eréctum *Trev.* ○|; Nicot*iàna* micrántha *H. Par.* ○; *O*nònis brevifòlia *Dec.* ○ or ◑; *P*olemònium disséctum *Rchb.* △; Silène Cserèii Baumg. △; Silène juvenàlis *Delil.* ○; Silène neglécta *Ten.* ○; *S*isýmbrium incànum *Bernh.* ○; Solidàgo grandiflòra *Desf.* △. Of the three following, Cinerària auriculàta *Led.* △ and *E*rigeron ciliàtus *Led.* ○ are published in IX. 112., but without authorities; and *R*anúnculus angulàtus *Presl* △ in IX. 241., but with a different authority. — *J. D.*

POLYPETALOUS DICOTYLEDONOUS PLANTS.

IV. P*apaveràceæ.*

3369*x*. PLATYSTE'MON *Benth.* (*Platys*, broad, *stēmōn*, stamen; filament obcordate.) 13. 6. Sp. 1.— califórnicus *Benth.* Californian ○ or 1 au Y California 1833. S s.l *Hort. trans.* 2. s. 1. 405 Synonyme: Genus Boóth*ia* Douglas MSS. Mr. Bentham has felt himself obliged to supersede this name, as he conceives that it would not be distinguished by foreigners from the genus Boót*ia* Wallich. Mr. Bentham has written Platystèmon califórnicum: but is not *stēmōn* masculine?

A low, branching, erect, pale green, annual plant, partially pubescent. Leaves alternate, oblong, lanceolate, obtuse, entire. Peduncles axillary, solitary, 6 in. long, tipped by an erect, fragrant, pale yellow flower, rather larger than that of Heliánthemum vulgàre. The plants last year raised from the seeds sent home by Mr. Douglas flowered very sparingly; but fine dried specimens received with the seeds evidence it a plant of considerable beauty. It is one of high interest to the botanist, "from forming the connecting link between the *R*anunculàceæ and *P*apaveràceæ. It has close affinity with Eschschóltz*ia* through the genera Platystígma and Dendromècon." (*Bentham,* in *Hort. Trans.*, 2d series, i. 405, 406.)

3369y. **PLATYSTI'GMA** *Benth.* (*Platys*, broad, *stigma*; stigma ovate.) 13. 1. Sp. 1. —
lineàre *Benth.* linear-*lfd.* £ __| pr ¼ ... Y California 1833. S ... *Hort. trans.* 2. s. 1. 406, 407

The description of the genus and species is from dried native specimens. Living plants have not yet flowered in Britain. "It resembles, in habit, Platystèmon califórnicus; but it is smaller, more tufted, and widely distinct in botanical characters. The flowers are yellow, rather smaller than those of the Platystèmon." (*Bentham.*)

3369z. **DENDROME'CON** *Benth.* (*Dendron*, a tree, *mēkōn*, a poppy; shrubby habit and affinity.) 13. 1. Sp. 1. —
rígida *Benth.* stiff-*habited* ■ __| or 2? ... Y? California 1833. S ... *Hort. trans.* 2. s. 1. 407
Mr. Bentham has written Dendromècon rígidum; as *mēkōn* is feminine, we have written rígida.

This is described from native specimens; but it is possible that Mr. Douglas sent home seeds from which, if sown, plants may by this time have arisen. "A densely leafy, rigid, smooth, little shrub. Leaves lanceolate, denticulate, wrinkled, rigid. Peduncles axillary, one-flowered. The flowers appear to be yellow, and nearly as large as those of *P*apàver nudicaùle." It is a very remarkable plant in this order, on account of its shrubby stem and coriaceous leaves and capsules." (*Bentham.*)

3370. **ESCHSCHO'LTZ*IA*.**
28369a cròcea *Benth.* saffron-*petaled* ✱ △ or 1 jl.o Saf California 1833. S co *Hort. trans.* 2. s. 1. 407

In general habit, foliage, and size of the flower, E. *c*ròcea closely resembles E. califórnica; but promises far to surpass it in the rich orange colour of the petals. E. *c*ròcea is equally hardy, and appears to flower even more freely. It is botanically distinguished from E. califórnica by the widely expanded limb of that curious appendage of the peduncle beneath the insertion of the calyx which is characteristic of the genus, and by the long attenuated point of the calyx. (*Bentham*)

Mr. Douglas has also sent home dried specimens and seeds of other species of Eschschóltz*ia*: these Mr. Bentham has described and named cæspitòsa, tenuifòlia, *h*ypecöìdes (whose flower resembles that of *Hy*pécoum grandiflòrum); "but no seed of them has vegetated."

1553 **MECONO'PSIS.**
13793a heterophýlla *Benth.* various-lvd. ⚘? △? pr. 1? ... O.R California 1833. S co *Hort. trans.* 2. s. 1. 408
crassifòlia *Benth.* thick-lfd. ⚘? △? pr. 1? ... O.R California 1833. S co *Hort. trans.* 2. s. 1. 408

Described from dried specimens. A plant or plants of one of the species has been raised in the Horticultural Society's garden; and, although the plant or plants died, it is hoped that more will be raised from a share of the first imported seed, which had been reserved. "The flowers of both species are of an orange red, about the size of that of *P*apàver Argemòne: they do not appear likely to be so ornamental as many others of the poppy tribe now in cultivation." (*Bentham.*)

XLV. *Grossulàceæ.*

719 ***RI'BES.***
†28130 punctàtum *R. & P.* dotted-*lfd.* ■ pr 3? ap.my Y.G Chile 1826. C co Bot. reg. 1658
A figure of a plant is published in the *Bot. Reg.* for Nov. 1829, t. 1278., which Dr. Lindley has there named *Ribes* punctàtum, and identified by the same references as those given in t. 1658; but with the latter figure and description he does not couple any mention of, or reference to, the figure and description at t. 1278.

A rather pretty evergreen shrub, remarkable for the shining yellowish green appearance of the leaves, and the short bunches of yellowish flowers. It is hardy enough to live in a dry border without protection; and would probably succeed extremely well in the south of England, in rocky situations. The species has been cultivated in the Horticultural Society's garden for several years. (*Bot. Reg.*, March.)

5059 nìgrum
2 báccâ flávidâ yellowish-berried ■ cu 4 ap.my Wsh ... ... C co
This may not be a variety of nìgrum; but it resembles nìgrum in habit and appearance wholly. All that I know of its history is, that W. Oldham, Esq., when residing at Rickinghall, near Diss, Norfolk, presented, on Oct. 2. 1827, cuttings of it to the botanic garden at Bury St. Edmunds, Suffolk, as of "the green-berried black currant;" and stated that it had been received into his neighbourhood from that of Bath. The cuttings were planted, grew, and formed plants, which bore berries not green but obscurely yellow, flavoured like those of the black currant; and, besides, plenty of branches for other cuttings, which were supplied to several persons who had asked for them: among others, to (I believe) J. Sabine, Esq., for the London Horticultural Society. — *J. D.*

XLVI. Cácteæ.

1474. *O*PU'NTIA.
†cylíndrica *Dec.* cylindric-*branched* ■ ⊐ gr 6 ... S Peru 1799. C a.l Bot. mag. 3301
Cèreus cylindricus *Hort. Brit.*, No. 12578. ; *O*púntia cylíndrica *Hort. Brit.*, p. 479.

This very interesting species, which has not yet flowered in Britain, has at length flowered in a Madeira garden. · The flowers are produced, several together, just below the ends of the branches, rather small and inconspicuous, about 1 in. in diameter, scarlet. *O.* cylíndrica " is truly intermediate between Cèreus and Opúntia." (*Bot. Mag.*, Feb.)

Cèreus triangulàris will, like Cùcumis *Mèlo, the Melon Plant, emit Roots into contiguous Water.* — In the end of 1833, I was shown, in the hot-house of the Rev. Edward Mathew, Pentlow Hall, Cavendish, Suffolk, Cèreus triangulàris rooting freely into water. The plant was standing near a leaden cistern occupied by water and growing plants of *N*ymphæ'a cærùlea and mìnor. The Cèreus triangulàris had extended some of its branches within a short distance of the water, and these had emitted roots freely into the water.— *N. S. Hodson. Bury St. Edmunds, Jan.* 1834.

LXXIII. R*osàceæ.*

1522. *R*O'SA 13470 indica. [Sw.fl.gar. 2.s. 229
nivea *D. Don* white *double-flowered Noisette's* ■ or 3 jl W.R Gardens 1831? C l
Imported from France, by Mr. Dennis, nurseryman, Chelsea, under the name of *Aime* Vibert; and is doubtless a hybrid production, most probably originated between *R*òsa indica and *R.* moschàta. (*D. Don.*)

Flowers very full of snow-white rather crumpled petals; the outer petals of the expanded flowers, and the exterior petals of the flower-buds, are of a deep red colour. From forty to fifty flowers, disposed in a corymb, terminate some of the shoots; and, as all the shoots evince a propensity to produce flowers wood-shoots for cuttings are but sparingly supplied. (*The British Flower-Garden*, March.) Mr. Dennis has informed us that he has also imported a beautiful variety, whose habit is in the mode of the " four-seasons " variety: it has rather large flowers, full of petals, which have a lilac-purple ground, and are striped with white. He also possesses the double-flowered Macartney, the flowers of which are beautiful, full of petals (double), and fragrant.

LXXIV. P*omàceæ.*

1507. *PY*'RUS.
†12951 crenàta *D. Don* notched-*lfd.* 🌳 or 15 my.jn W Nepal 1820. G c Bot. reg. 1655

The fine large leaves of this species render it to be desired in the shrubbery; its flowers, too, are ornamental. It is to be increased by grafting on the whitethorn. The figure is from a plant in the London Horticultural Society's garden. See also in p. 169. (*Bot. Reg.*, March.)

LXXVII. *Leguminòsæ.*

1960. GASTROLO'BIUM.
10566*a* retùsum *Lindl.* blunt-*lfd.* ■ ⊔ or 1½ my O.S N. Holl. 1830. C a.l.p Bot. reg. 1647

" A smaller plant than G. bílobum. Its flowers are of the same rich orange yellow, but in smaller heads; and their keel is not purple, but of the same colour as the other petals." According to the figure, each head is composed of about twenty flowers: the heads are both terminal and axillary. Mr. Knight, Chelsea, possesses it; he raised it from seeds collected by Mr. Baxter. " It is a pretty green-house plant, easily propagated by cuttings." (*Bot. Reg.*, Feb.)

1945. SCO'TT*IA.*
17311*a* læ'vis *Lindl.* smooth-*branched* ■ ⊔ or 3 jn.s? Y.S N. Holl. 1833. C a.p Bot. reg. 1652

A third species of the rare genus Scótt*ia*. Mr. Knight, Chelsea, has raised it from seeds collected by Mr. Baxter. " It differs from S. dentàta, not only in its flowers having no tinge of red, and in its narrower, more finely toothed leaves, but also in its branches being altogether free from the numerous rough projecting points which are found upon those of both the other species." S. læ'vis is " a delicate green-house plant: it requires a cool shelf in the winter, and abundant ventilation." (*Bot. Reg.*, Feb.)

1980. ADE'SMIA. [Sw.fl.gar. 2.s. 230
viscòsa *Gill. & Hook.* clammy-*herbaged* ■ ? ■ ? ⌴ or 3 au Y Chile 1832. C lt.l

A very pleasing species; spineless, of upright growth and elegant leaves, which consist of from 9 to 14 pairs of small oblong crenated leaflets; the flowers are produced 8 or 10 in a raceme, which, where present, terminates a branch; the corolla is of a rich gamboge yellow, and large for the genus. Messrs. Allen and Rogers, nurserymen, Chelsea and Battersea, have raised the A. viscòsa. (*The British Flower-Garden*, March.)

·1985. *LUPI'NUS.*
17706a nànus *Benth.* dwarf ⁎ ○ or 1 ? jl.s B.Va California 1833. S s.l Hort. trans.2.s. 1. pl.14. fig.2

Is elegant from the number of its flowers and their variegated colour. Leaves much like those of *L.* bícolor. It produces freely flowers and seeds, and is a desirable ornament of the garden. The Horticultural Society has already distributed seeds of it. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 410.)

densiflòrus *Benth.* dense-*inflor.* ○ or ¾ jl.s W.Pk California 1833. S s.l *Hort. trans.*2.s.1.410

Leaves of about nine leaflets, covered with fine soft hairs. The flowers grow in whorls which nearly touch each other; the corollas are white, delicately stained with pink; they are also a little speckled at the base of the vexillum. *L.* densiflòrus probably requires shade. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 410.)

23462a àlbifrons *Benth.* hoary-*herbaged* ■ ⌴ or 3½ s.n Dp.B California 1833. C s.l Bot. reg. 1642
Very near *L.* ornàtus; from which it differs in its shrubby habit, short leaves, long and slender racemes, and rather smaller deep blue flowers. (*Benth.* in *Hort. Trans.* 2d ser. i. 410.)

The flowers are in racemes 1 ft. in length. "Although not so handsome as *L.* ornàtus, it is well deserving of cultivation. It is not, perhaps, hardy enough to bear the rigour of our winters without protection; but it seems to thrive in a glass pit, and would probably succeed in the front of a south wall, covered from wet in winter. It seems not to seed freely, and does not increase readily by cuttings. (*Bot. Reg.*, figure in Jan., text in Feb.)

leptophy̆llus *Benth.* narrow-*leafleted* ○ or 1 jl.s B.Li California 1833. S s.l *Hort.tr.*2.s.1.411

A species not so pretty as many others. It is remarkable for its narrow leaflets and hairy surface. The corollas are elegantly coloured with bluish-lilac, and there is a deep crimson stain in the middle of the standard. The species probably delights in shade. (*Bentham*, in *Hort. Trans.*, 2d. ser. 1. 411.)

[*Hort. trans.* 2.s. 1.411
hirsutíssimus *Benth.* most hairy-*herbaged* ○ cu ¾ ? jl.s P.R California 1833. S s.l

Interesting botanically. Its leaves are spotted with pale green, in the manner those of a Pulmonària are with white; the corollas are of a reddish purple colour. (*Bentham*, in *Hort. Trans.*, 2d ser. 1. 411.)

CIII. *Malpighi*àceæ.

1395a. STIGMAPHY'LLUM *Hil.* (*Stigma*, a stigma, *phyllon*, a leaf; stigma foliaceous.) 10. 3. Sp. 6.—20. ?
aristàtum *Lindl.* awned-*lfd.* ⌇ □ or 20 ? jn.au Y Brazil 1832 ? C p.s.l Bot. reg. 1639

A handsome plant. The leaves are stalked and arrow-shaped, and are disposed in pairs at intervals along the branches: these are long, slender, and twining. The flowers, which are yellow, each as broad as a shilling, and of five fringed petals, are placed, from three to five together, in an umbel. The umbels are stalked, and in pairs, from the axils of the opposite leaves. "The different species of this genus are common in Brazil." S. aristàtum is figured from the stove of Mrs. Marryatt of Wimbledon, who had received it under the name of Banistèr*ia* auriculàta; "which is quite another species, but of the same genus."

auriculàtum (*Lindl.* ?) auricled (*lfd.* ?) ⌇ □ or 10 ... Y Brazil 1820. C p.s.l Cav. dis. 255
Banistèr*ia* auriculàta *Cav.*, Hort. Brit. 11746.
The scandent species of Malpighi*àceæ* ascend by means of an entwining habit (⌇ ⌇) rather than by means of tendrils of any kind (⌇ ⌇). Accordingly, the sign ⌇ may be substituted in *Hort. Brit.* for the sign ⌇, in those of the species to which it is attached in the genera Byrsónima, Galphímia, Gæ'rther*a*, *T*hryállis, Hiræ'*a*, Triópteris, Banistèr*ia*, Heterópteris.

CXIX. *Zygophy̆lleæ.*

1304a. FABA'GO *Led.* BEAN CAPER. (*Faba*, a bean; leaves resemble those of a bean.) 10. 1. Sp. 2—6 ?
màjor *D. Don* larger ⌇ △ or 4 jl.s W.Saf Syria 1596. S gra.l Sw.fl.gar.2.s.226
Zygophy̆llum Fabàgo *L.*! Hort. Brit. 10886. "We willingly follow Mr. Brown in separating this species from Zygophy̆llum, from which it is distinguished by several important characters;

especially by the position of the radicle in respect to the hilum."—*D. Don*, who cites, from Ledebour and his own examination, five other zygophyllums which are probably referable to the genus Fabàgo.

F. màjor appears to delight in a gravelly loam. In the Chelsea Botanic Garden, planted at the foot of the rockwork, near the edge of the gravel walk, it has attained the height of 4 ft., and blossomed abundantly. The whole herb has the smell and taste of Cápparis spinòsa. (*The British Flower-Garden*, Feb.)

CXLVII.? *Limnántheæ* R. Br. in *London Phil. Mag.*, July, 1833, new series, vol. iii. p. 70. and 71.

The place of this new order is not absolutely determined. It includes the genera Limnánthes *R. Br.* and Floérkea Willd.

LIMNA'NTHES *R. Br.* MARSH-FLOWER. (*Limnē*, marsh, *anthos*, flower; the plant's habitat.) Sp. 1.—
Douglàsii R. Br. Douglas's ✻ ○ or ... W.Y California 1833. S m.s *Hort.trans.*2.s.1.409

An interesting plant, from the elegance of its flowers and foliage. It is a prostrate pale-green annual, with finely divided rather succulent leaves, and five white striated petals with a yellow base. The flowers are of about the size of those of the Campánula rotundifòlia, are slightly fragrant, and very pretty. From the habit of this plant, it seems to require a damp and shady situation, where it will probably remain in flower for a month or six weeks. It is propagated by seeds, which are produced in tolerable plenty. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 409.)

MONOPETALOUS DICOTYLEDONOUS PLANTS.

CLXIX. Sapòteæ.

556. CHRYSOPHY'LLUM.
†4490 monopyrènum *Sw.* one-stoned ♀ ▭ or 30 au.mr W W.Indies 1812. C r.m Bot.mag.3303

Figured and described from a tree which grows in the neighbourhood of Funchal, Madeira. This tree forms rather an elegant evergreen one, about 30 ft. high, and with a trunk not exceeding 1 ft. in diameter. All parts of the tree are, while young, milky, as is shown when they are cut or broken. The leaves (oval) are smooth and shining above; beneath beautifully satiny, with pale rust-coloured close-pressed silky hairs. The leaves, before they fall, turn to a beautiful deep rich red, variously marbled or mottled with yellow or white. . . . . Flowers very small, scentless. . . . Fruit a shining purplish black ovato-oblong drupe, about 1½ in. long and half an inch broad; the drupes are always produced in great abundance; and are eatable, but not esteemed. (*Bot. Mag.*, Feb.) In the London Horticultural Society's collection at Chiswick, a shrub of this species is trained over the interior face of the back wall of one of the green-houses: the plant's leaves, especially their rusty satiny surface, are most beautiful objects.

CLXXXVI. *Compósitæ.*

2340*a*. PERICA'LLIS *D. Don.* (*Perikallēs*, very pretty; radial ligulæ beautiful.) 19. 2. Sp. 8.—
Tussilàginis D. Don. Coltsfoot-*lfd.* £ [Δ] or 1 w.sp Li Teneriffe 1829. S a.l Sw.fl.gar.2.s.228
Cinerària *Tussilàginis Herit.*, Hooker in *Bot. Mag.* 3215.; Senècio *Tussilàginis Lindl.* in Bot. Reg. 1550. Mr. D. Don has, in the place cited, investigated the structure and affinities of this plant; and deems it a form of a distinct and natural genus, which he has characterised, and named Pericállis. To it he would refer this plant, and Cinerària cruénta, aurìta, láctea, lanàta, multiflòra, populifòlia, and *malvæfòlia*. The genus Pericállis has, he has remarked, the habit of *Tussilàgo*, the involucrum of *Oth*ónna, and the corolla of *Sen*ècio.

Pericállis *Tussiláginis D. Don* is an ornamental and desirable plant. See IX. 106. Mr. Don deems it perennial if kept in a green-house. (*Brit. Flow. Gard.*, Feb.)

2253*a*. KENTROPHY'LLUM *Neck.* (*Kentron*, a spine, *phyllon*, a leaf; leaves very spiny.) 19. 1.
†20440 arborèscens *Hook.* shrubby ■ ⊔ or 6 au.n Y Spain 1731. C a.p Bot. mag. 3302
Onobròma arborèscens *Spr.*, *Cárthamus* arborèscens *L.*

This singular and not unornamental plant "has stood out of doors, in the Dublin College Botanic Garden, for the last two winters, in a sheltered border, flowering freely in autumn, and throwing out many side-shoots from its woody stem. Both flowers and leaves have an agreeable musky smell." (*Mr. J. T. Mackay.*) "Its lively yellow [heads of] flowers, nestled among the bright green foliage, were in perfection to the very end of November, when our figure was taken." (*Dr. Hooker*, in *Bot. Mag.*, Feb.)

2323. *H*ELICHRY'SUM 20992 bracteàtum.
2 involùcro álbido whitish-involucred ○ or 3 jl.o Y Camb. bot. gard. 1833 ? S co

A living plant or plants of this remarkable variety was growing, in 1833, in the Cambridge Botanic Garden; whence derived, and when, I either omitted to ascertain or have forgotten. — *J. D.*

2337. *A*'STER.
†21332 éminens *W.* tall-*stemmed* ♃ △ or 7 s.o B United States ... D co Bot. reg. 1614
2 virgíneus *Nees* pure white*rayed* ♃ △ or 3 s.o W.Y United States ... D co Bot. reg. 1656
" *A.* júnceus *H. K.*, *A.* longifòlius *Lam.*, *A.* virgíneus *Nees* Synops. Ast., *A.* éminens var. virgíneus *Nees* Gen. et Sp. Ast., *A.* álbus of English gardeners." (*Bot. Reg.* 1656.)

This species is characterised by its involucrum; which consists, in all the varieties, of a few very narrow rather leafy spreading scales, which seem as if they all originated from the same circle, and have a somewhat squarrose appearance. The rays of some varieties are of a violet colour; of others, light blue; and, in *A.* éminens var. virgíneus, white. (*Bot. Reg.*, March.) This last variety is doubtless figured from the Horticultural Society's collection.

CXCI. *Caprifoliàceæ.*

892. *V*IBU'RNUM. [Bot. reg. 1650
7129*a* cotinifòlium *D. Don* Cotinus-lfd. ■ or 10 my.jn W.Pk Himalayan mountains 1830 ? L 1

Common in the Himalayas, at elevations of from 5000 ft. to 7000 ft., in 30° N. lat. In Britain it proves tolerably hardy. It much resembles *V.* Lantàna: its leaves have the same wrinkled grey aspect, its branches the same mode of leafing and budding, and its fruit a very similar form; but the flowers are much larger, more coloured with pink, and neither flat nor slightly bell-shaped, but of a distinct obconical figure. (*Bot. Reg.*, Feb.)

CXCV. *Asclepià*deæ.

778. CEROPE'GIA. (*Kēropēgion*, a lampstand or candelabrum; resemblance borne by the flowers as disposed in umbels.)
†6213*a* Lúshi*i* Grah. *Mr.* Lush's ✱ ⌇ [△] cu ... o G.P E. Indies 1833. O p.l Bot. mag. 3300
It has great affinity with C. acuminàta *Rox.*, especially in the structure of the flowers. The leaves of C. Lúshi*i* are narrow, thick, fleshy, veinless; those of C. acuminàta, broader, not fleshy, and have lateral veins which emanate from the midrib.

C. Lúshi*i* is not showy, but is graceful. "Many of the ceropegias are possessed of considerable beauty, and are highly ornamental to the bushy and uncultivated places in which they grow. They are, too, esculent; and are used, either raw or stewed, in curries by the natives. Of one species, C. bulbòsa, the root resembles a small turnip, no less (according to Dr. Roxburgh) in appearance than in flavour; and its leaves taste like purslane." (*Bot. Mag.*, Feb.)

At the foot of p. 737. in Vol. IX. it is stated, that, at a show, on June 26. 1833, of the Norwich Horticultural Society,

> "Ceropègia stapeli*æfórmis*, a curious little plant, raised by Mr. Hitchen, and now flowered for the first time, was exhibited by him, and received the large silver medal." Is this an undescribed species? It probably is.

Hóya carnòsa will emit Roots into the Mortar of Walls, which collect there the Means of supporting the Plant. — In Sept. 1833, Mr. Shepherd, sen., the venerable and respected curator of the Liverpool Botanic Garden, showed me, in a stove there, a plant of Hóya carnòsa in full bloom growing from interstices of the wall, into which it had established its roots; the part of the plant which intervened this point of attachment and that of the pot in which the plant had originally grown had died away. I have a plant which has rooted firmly into a wall in a green-house here, perhaps to follow the course of the plant at Liverpool. — *N. S. Hodson. Botanic Garden, Bury St. Edmunds, Jan.* 1834.

CXCIX. *Convolvulàceæ.*

491. IPOMŒ'A. [Bot. mag. 3297
rùbro-cærùlea *Hook.* reddish-blue-*corollaed* ✱ ? ⌇ [△] spl. 8 ? s.n B.R Mexico 1833 ? S p.l

" A twining smooth plant, with herbaceous branches. Leaves heart-shaped, acuminate. Peduncles axillary, bearing from three to four flowers. Corolla, in bud, white, with the limb of a rich lake red; which, when the corolla is fully expanded, becomes of a fine purplish blue. . . . . There are, perhaps, few, if any [of the species of Ipomœ'a in our collections], that can equal, in the beauty of the flowers, I. rùbro-cærùlea: for the opportunity of figuring which we are indebted to John Allcard, Esq., of Stratford Green, Essex; in whose stove, and that of his neighbour, Miss Loxley, plants have been in flower the [? which] last two months. The seeds from which they have arisen were collected in the province of Guanaxuato, in Mexico, by Mr. Samuel Richardson, an officer in the Anglo-Mexican mining association; who presented them to J. D. Powles, Esq., of Stamford Hill, who has liberally distributed them." (*Bot. Mag.*, Feb.)

CCXI. *Scrophularineæ.*

65. CALCEOLA'RIA 27994 arachnöidea. [Sw.fl.gar.2.s.227
var. refúlgens *D. Don* refulgent-*corollaed* ♃ Δ or 1 jn.s Bt.Ru.R Eng.hyb. 1833? D r.lt
Raised by Mr. Gillen (gardener to Mr. M'Intosh, at the East India Docks), from seeds which had been cross-impregnated between two of the numerous varieties originated between C. arachnöidea and C. corymbòsa. (*Brit. Flower-Garden.*)

Flowers cymose. Corolla of a bright rufous red, the upper lip very short; lower one large, inflated, nearly round. . . . . Mr. Gillen sent us specimens of several others, equally beautiful, which he had raised in the same way. (*Brit. Flower-Garden*, Feb.)

CCXIII. *Solàneæ.*

3474. NIEREMBE'RG*IA*.
filicaúlis *Lindl.* thread-*like*-stemmed ♃ Δ or 1 my Li Mexico? 1833. C p Bot. reg. 1649

A newly introduced species. Mr. Tate of the Sloane Square Nursery communicated the specimen figured. In Britain "it is a pretty green-house perennial, requiring to be kept in an airy place; and may be easily multiplied by cuttings." It differs from N. grácilis in being generally glabrous, not pubescent; in its corolla being of a lilac, not a grey, colour; "the tube of its corolla is also shorter; and its stamens covered with glandular hairs." According to the picture, the plant is a very pleasing one in its slender herbage, garnished with numerous flowers, whose red-lilac corollas are 1 in. across, and have in their centre, at the throat of the tube, a conspicuous yellow spot. The segments of the stigma are apposed to the anthers in a remarkable manner. (*Bot. Reg.*, Feb.)

CCXIV. *Acanthàceæ.*

58*a*. BELOPE'RONE *Nees.* (*Belos*, an arrow, *perone*, a strap or band; connectivum arrow-shaped.)
2. 1. Sp. 3.—
oblongàta *Nees* oblong-*l'fd.* ■ □ or 3 s Ro.P Brazil 1832. C p.l Bot. reg. 1657
Belopérone *Nees von Esenbeck*, in Wallich Pl. As. Rar. 3. 102., Justícia oblongàta *Lk. & Otto.* [The figure of Dr. Hooker's Justícia nodòsa, in *Bot. Mag.* t. 2913., exhibits a plant apparently distinct; and Dr. Hooker speaks of them as distinct: the synonyme applied to No. 27986. in *Hort. Brit.* seems, therefore, wrongly placed.]

A pretty species, of, according to the figure, a free full habit, copiously clad in willow-like leaves; and adorned at the tips of its branches with axillary spikes of flowers, whose corolla is 1¼ in. long, and of a rosy purple colour. It is "easily cultivated, and may be easily multiplied by cuttings. The drawing was made in September, 1833, in the nursery of Mr. Knight, Chelsea." (*Bot. Reg.*, March.)

CCXX. *Verbenaceæ.*

1745. ZAPPA'*NIA* (rather than Zapània, as in *Hort. Brit.*) 15694 nodiflòra (knotted-inflor.).
ròsea *D. Don* rosy-*corollaed* ♃ Δ pr ½ jl Pk Chile 1832. D p.l Sw.fl.gar.2.s.225

A pretty little perennial plant for cultivating in a pot or upon rockwork. Mr. Knight, Chelsea, possesses it. Its creeping leaf-clad shoots or branches emit roots very readily; and they form a miniature tuft of verdant herbage, from which numerous flower-stems arise; which, with their branches, are terminated by little dense heads of small flowers, with rosy or pink corollas, marked with a yellow spot. "It is nearly if not quite hardy." (*The British Flower-Garden*, Feb.)

CCXXI. *Labiàtæ.*

74. MONA'RD*A* 618 fistulòsa. [Bot. mag. 3310
flòre maculàto *Hook.* spotted-*lipped* ♃ Δ or 3 su Pa.Ro Spot New Orleans 1832. D co
M. menthæfòlia Graham, in Bot. Mag. 2958.

Leaves ovate, acuminate. Heads of flowers rather large. Corolla about

1 in. long, pale rose-coloured; the upper side of the lower lip spotted with deep purple. Like every Monárd*a*, ornamental. It is in the collection of the Glasgow Botanic Garden. (*Bot. Mag.*, March.) Westríng*ia* Dampièri (*Bot. Mag.*, 3308.) and cinèrea (*Bot. Mag.*, 3307.) are figured in the *Bot. Mag.* for March, and from the Kew collection. Both are pretty in their rosemary-like leaves, and white corollas sprinkled with little rosy spots. These species had flowered in October. A habit of flowering so late in the year must increase their interest in the green-house.

CCXXVIII. *Coniferæ.* Several species of Pìnus, likely to prove valuable additions to our stock of timber trees, have been raised in the garden of the Horticultural Society, from seeds received from Mr. Douglas, who has distinguished them by the names Sabini*àna*, montícola, amábilis, nóbilis, grándis, insígnis, and Menziès*ii*. The living plants are yet too young to be eligible for botanical description. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 404.)

MONOCOTYLEDONOUS PLANTS.

CCXXXIV. *Bromel*iàceæ.

957. **BILLBE'RG*IA*.** [Bot. mag. 3304
purpùreo-*ròsea* *Hook.* purple-*petaled* rosy-*sepaled* £ △ or 2 n Ro.P Brazil 1831. Sk r.m

It will, perhaps, yield in beauty to but few of its tribe. The leaves are broad, 1½ ft. long, edged with strong prickles. The scapes are from one to three in number, longer than the leaves, of a reddish purple colour. The flowers are arranged in a compound spike, from 8 in. to 10 in. long; and, although they are not individually large, they are numerous: and, in their number, rosy sepals, and purple petals, constitute an ornamental species. It was introduced by Mrs. Arnold Harrison; and has flowered, in the Liverpool Botanic Garden, in 1832, 1833. (*Bot. Mag.*, March.)

CCXL. *Orchídeæ. The Cape Species of Orchideous Plants.*—We presume that it is impracticable to cultivate them permanently in Britain, by any means hitherto discovered; for the roots, although, when first imported, they flower, afterwards disappear. They should be planted in sandy loam, and kept in as light a green-house as possible: for it is probable that the reason of their disappearing is the want of light during their growing season in this country. (*Bot. Reg.*, March, t. 1653.)

2484. **BARTHOLI'N*A*.**
†22512 pectinàta *R. Br.* pectinated-*lipped* ★ △ el ½ au Pa.V C.G.H. 1787. O a.l Bot. reg. 1653

Of great interest in its kidney-shaped leaf, in its flower's lip cut into long linear segments resembling the teeth of a comb, its rarity, and the great difficulty of cultivating it in this country. It is figured from the collection of Messrs. Rollisson, nurserymen, Tooting. (*Bot. Reg.*, March.)

2540. **ONCI'DIUM.**
22690*a* ciliàtum *Lindl.* fringed-*lipped* £ △ or ½ n Y.R Brazil 1818. D p.r.w Bot. reg. 1660

A pretty little species, closely allied to O. barbàtum. The picture exhibits four flowers in a raceme, which terminates the unbranched short slender scape. The flowers vary in colour: sometimes being yellow spotted with red, and sometimes of a brownish orange. Mr. Knight, nurseryman, Chelsea; Sir C. Lemon, Carclew, Cornwall; and the London Horticultural Society possess plants of this species. (*Bot. Reg.*, March.) Many of the orchideous epiphytes are found to succeed if tied to short pieces of branches of trees with rugged bark: none succeed better on this plan than the different species of Oncídium. (*Bot. Reg.*, Feb.)

2549. **ORNITHI'DIUM.**
álbum *Hook.* white-*perianthed* £ △ or 1 n W. Trinidad 1833. D p.r.w Bot. mag. 3306
Dr. Hooker finds great difficulty in referring this plant to its proper genus.

Sent from Trinidad, by Mr. David Lockhart, along with a very accurate drawing by Mr. J. Lockhart, to the Glasgow Botanic Garden, where it flowered in Nov. 1833. Leaves linear, not very narrow. Flowers rather large, white. (*Bot. Mag.*, March.)

2571. **CALA'NTHE.**
densiflòra *Lindl.* dense-*racemed* £ ⍍ or ¾ o Y Sylhet 1832? D l.lt Bot. reg. 1646

A terrestrial species. It grows very freely in loam and decayed vegetable matter, in a damp stove. The leaves of C. densiflòra, as those of the other species, are pleasing objects; its flowers, which are not large, are disposed in a dense raceme: they are pendulous in some degree. W. W. Salmon, Esq. [? where resident], and Messrs. Loddiges possess plants of C. densiflòra. (*Bot. Reg.*, Feb.)

2554. **EPIDE'NDRUM.**
†22747 noctúrnum *L.* night-*fragrant* £ ⍍ or 1 o.n Y.W W.Indies 1816. D p.r.w Bot. mag. 3298

The flowers, though scentless during the day, yield at night, like the greenish or yellowish white flowers of many other species of plants, a very powerful odour. Linnæus compares that of the flower of E. noctúrnum to that of the flowers of *Lí*lium cándidum *L.* Dr. Hooker remarks, that, "to us, even by day, there is a faint smell resembling cucumber." Messrs. Loddiges had, and may still have, E. noctúrnum: it is in the Liverpool and Glasgow Botanic Gardens. (*Bot. Mag.*, Feb.)

CCXLIII. *Musà*ceæ.

745. **HELICO'NIA.**
pulverulénta *Lindl.* dusted-*leafed* £ ⍍ or 2 jl G.S S. America? 1830? D p.l Bot. reg. 1648

A species of not large proportions, but one possessed of considerable beauty. "It is impossible to imagine any thing more delicate than the blue [pulverulent] bloom which thickly covers the underside of the leaves [these have, too, a narrow edging of red]; or more brilliant than the vivid scarlet of the flower-leaves or spathes, among which nestle, as it were, a few bright-green flowers." (*Bot. Reg.*, Feb.)

CCXLVII. *Asphodèleæ.*

3283. **TRITELEI'A** *Hook.* (*Treis*, three, *teleios*, perfect; as the plant produces three stamens with fertile anthers, the other three are barren.) Sp. 2.—
28010*a* láxa *Benth.* lax-*umbelled* ♉ △| or 1¼ jl.au Dp.B California 1832? O p.l Hort. trans.2.s.1.pl.15.f.2

A very handsome plant. Its flowers are about the size of those of Brodiæ'*a* grandiflòra, and of the same deep blue colour. They grow in a lax umbel; but, notwithstanding the length of their stalks, stand nearly erect: the scape is, however, apt to be procumbent if not supported. T. láxa seeds freely, and will probably soon be rendered common. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 413.) For a suggestion on culture, see under Cyclobóthra in the next page.

CCLI. *Liliàceæ.*

3339. **CALOCHO'RTUS.** The order *L*iliàceæ includes numerous plants of distinguished beauty; but, surely, few among them surpass, in elegance of habit and beauty of petal, the Calochórti. Of the genus Calochórtus, three species are registered in p. 476. of *Hort. Brit.*; namely, nítidus, macrocárpus, and élegans. Of these, élegans is now referred to the genus Cyclobóthra: see below. Thus, of Calochórtus there are but two species enrolled in *Hort. Brit.* A third species, C. lùteus, is described in this Magazine (IX. 240.); and now the following have to be added. The whole, from first to last, have, we believe, been introduced by Mr. David Douglas.

28186*a* spléndens *Dou.* splendid-*corollaed* ♉ △| spl 1¼ au.s Li California 1832? O s.p [Hort. trans. 2. s. 1. pl. 15. f. 1

This elegant species has very much the appearance of C. macrocárpus. It is, perhaps, less branched; and the leaves are shorter. The petals are paler-coloured, and have a small dark spot at their base. The bulbs of it, transmitted by Mr. Douglas, have grown freely; and many have already been distributed. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 411.)

28186*b* venústus *Dou.* handsome-*corollaed* ♉ △| spl au.s W.spot California 1832? O s.p [Hort. trans. 2. s. 1. pl. 15. f. 3

C. venústus resembles C. macrocárpus in the size of the flowers. It differs from both macrocárpus and spléndens in several botanical points; and "by the colour of the petals, which is a pure white, with the lower part marked in streaks of deep red on a yellow ground; and with a spot near the extremity of each petal, much resembling a drop of blood. C. venústus, like C. spléndens, is a very handsome species, and has been raised in a sufficient quantity for distribution. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 412.)

3357 CYCLOBO′THRA. Of this genus, which is closely allied to Calochórtus, two species are registered in p. 475. of *Hort. Brit.*; namely, C. purpùrea and C. barbàta. To these the species hitherto called Calochórtus élegans, and the following species introduced by Mr. Douglas, are now to be added: — [Hort. trans. 2. s. 1. pl. 14. f. 1
pulchélla *Benth.* pretty-*flwd.* ☿ △ or 1 au.s Y California 1832? O p.l

The stem is about 1 ft. high, much branched; each branch terminated with an umbel of two or three pendulous flowers issuing from the base of a green leaflike bract, longer than the peduncle. The leaves are narrow, linear lanceolate, 3 in. to 5 in. long, placed at the ramifications of the stem and branches. The sepals are of a greenish hue, and ovate lanceolate form; the petals longer, much broader, of a bright yellow colour, and bordered with a beautiful but delicate fringe. C. pulchélla produces seeds in great abundance, and will probably become as common as a fritillary. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 413.)

álba *Benth.* white-*petaled* ☿ △ or 1 au.s W California 1832? O p Hort.trans.2.s.1.pl.14.f.3

C. álba is closely allied to C. pulchélla; but the flowers are larger, the petals both longer and broader, of a whitish colour, and not fringed at the margin. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 413.)

All the species of Calochórtus, Cyclobóthra, and Triteleìa are probably hardy; they seem only to require a shady situation, and a warm and light soil which is effectually protected from wet in winter. But, as they are all at present extremely rare, they have hitherto been taken up as soon as their leaves had died, and kept dry until the roots had begun again to shoot. (*Bentham*, in *Hort. Trans.*, 2d ser. i. 414.)

Art. V. *Retrospective Criticism.*

Corrections. — *Mr. Rangecroft.* In IX. 675., for "Mr. Haycroft," *read* "Mr. Rangecroft." This gentleman, now long since dead, when gardener to the late Duke of Portland, at Bulstrode, was a most successful cultivator of exotic plants. He was the first who induced *Nelúmbium* speciòsum, Magnòl*ia* purpùrea, and, our informant, Mr. Main, believes, Ixòr*a* coccínea, to flower in Britain. Under his culture, too, those rarely flowering plants, Portlánd*ia* grandiflòra and Catesbæ'*a* spinòsa flowered frequently. In X. p. 10. line 6. from the bottom, for "bridges," *read* "hedges."

The Gardener's Magazine as a monthly Publication. — I must think your Magazine would meet with more extensive circulation if you would publish it monthly, at 1*s.* 6*d.* or 2*s.* Two months is too long a time from one feeding of the mind till the next. Although coarse-feeding animals thrive best with feasting and fasting; still man is not so gross in his mental appetite, but that he could digest and turn to more use a little monthly, than he can a large dose, if he be crammed with it only every alternate month. — *H. T. Bury St. Edmunds, Dec.* 3. 1833.

Several correspondents having expressed a similar opinion, we have determined on complying with their request, and on publishing the Magazine in future monthly, at 1*s.* 6*d.* — *Cond.*

On the fraudulent Practices of Gardening Authors. (VIII. 289. IX. 116. 492.) — We have received a long letter from "A Constant Reader," full of severe criticism on "An Enemy to Deceit." It would occupy three of our pages, and would be of very little interest to any but the parties concerned. The object of "A Constant Reader" is to defend the late Mr. Stewart of Valleyfield, for having published a paper, stating that he grew his pines without moist bottom heat; and afterwards, when he employed tan for that purpose, for not publishing a notice of the inefficiency of the mode which he had previously recommended to the public (VIII. 289. IX. 116.) Our opinion is, that "An Enemy to Deceit" did quite right in exposing the discrepancy between Mr. Stewart's paper and his subsequent practice; and we only regret that the exposure did not take place in Mr. Stewart's lifetime. — *Cond.*

Heating by Hot Water at Munich. — With reference to your complaint (VIII. 67.) of my not having done justice to the Gardener's Magazine, I am sorry to have unintentionally given you offence; but, in truth, if I had acknowledged my obligations to specific works, I must have quoted, not only your Magazine, but also the *Transactions of the Horticultural Society*, and other journals, which, for brevity's sake, I included under the appellation of English publications. I confess, however, that none of these works furnished me with so many explanations and observations relating to the before-named object as your valuable Gardener's Magazine; for the communication of which, in particular, I therefore return you my warmest thanks. Since I sent you my tract, I have made a much more extensive application of hot water, as a method of heating, in the large green-house at Nymphenburg, and with equal success. I refer for your opinion to a brief account which I have given of it in the *Landwirthschaftlichen Wochenblatte* for 1832, No. 33., together with the illustrating engravings. [We shall translate the article, and give it, accompanied by engravings, in a future Number.] With respect to the plan of the boiler, the account may be of some interest to the English reader, as I do not remember to have seen one of similar form mentioned, either in your Magazine or in any other English journal. — *Sckell, Munich. July*, 1833.

Mr. Anderson's Paper on the Drooping Ash, published in the Berlin Horticultural Transactions, and translated by us in the Gardener's Magazine. (IX. 596.) — Mr. Anderson, on reading his paper re-Englished by us, and finding it did not convey the sentiments contained in his original communication sent to Berlin, naturally enough concluded that we had mistranslated his paper, in transferring it from the *Berlin Transactions* to our pages. In this, however, he was decidedly mistaken; and the error must have arisen in the translation of his original paper from the English into German. In confirmation of this view, we give the following extract from vol. vi. of the *Berlin Transactions*, p. 313., in which it will be seen that M. Borchmeyer is contending against the supposed opinion of Mr. Anderson, that the weeping ash is a distinct species :— " M. Borchmeyer of Darfeld communicated his experience respecting the drooping ash, and more particularly relating to the opinion of M. Fintelmann, that the drooping ash should be considered a different species from the common ash, as the plants raised from its seeds retain the property of drooping. This opinion M. Fintelmann communicated to the Society at a meeting held December 4. 1825. Against this, M. Borchmeyer stated, at a meeting held August 9. 1829, that, amongst 1000 seedlings, raised from seeds produced by the drooping ash, some of which were from 6 ft. to 7 ft. high, not one showed the least inclination to droop, nor any other mark by which it could be distinguished from the common ash.

The Variegated Acer (A. *Pseùdo-Plátanus*) *and the Purple Beech.* M. Borchmeyer also stated his experience respecting these trees; which is, that a few seedlings out of a great many resemble the parents, while the rest assume the common form. These two statements, made from experience, show the correctness of the prevalent idea that the varieties mentioned of the ash, acer, and beech have no claim to be considered species; and this is the opinion which Mr. Anderson maintained in his paper. — *Cond.*

Mr. Munro's Method of training the Oak, &c., for Timber for Naval Purposes. (p. 76.) — We have received a long reply to Mr. Munro, but we really do not think we could publish it with sufficient profit to our readers. We will print the essence of it, however, if the writer will bring it into a quarter of a page. — *Id.*

Culture of Tulips and Ranunculuses. — Sir, In the preface to the fifth edition of your valuable *Encyclopædia of Gardening* you earnestly request the assistance of every reader willing to correct an error or supply a deficiency; you will, therefore, I trust, pardon the following details of part of the culture of tulips and ranunculuses.

As to tulips, I observe that you recommend rotten dung and mould, about a foot thick, and not above two or three inches from the base of the bulbs. The florists around me avoid dung in any shape or modification; for bulbs, planted even in a fresh soil, quite free from dung, are sure the first year to have far too much colour, from the soil being too rich. The same bed will last for three plantings, that is, three years, with no more than trenching it each year two spades deep; the fourth year, half the mould may be replaced by fresh mould, but free from any sort of dung. The bed being planted is to be sheltered from rains for about a fortnight; and, when the bulbs have shot out leaves above ground, it should be defended by a netting spread upon hoops, which must be raised as the tulips get higher, and the sides and ends protected by a fence of netting or wirework. This is absolutely necessary, on account of the scratching of dogs and cats, which otherwise would destroy many blooms.

With respect to the Ranunculus Beds, I observe you recommend placing rotten dung at five inches below the surface; but the florists here say nine, certainly not less than eight inches; and that, if the dung were placed nearer, it would cause the flowers to become blighted. The bed, after it is made, is, for a week before planting it, covered with matting, or canvass, or hoops; but on fine days it is uncovered, and raked into ridges to dry: for the ground at this season (February) has much more moisture than is required to make a ranunculus root swell and vegetate; and if this precaution were omitted, the probable result would be the rotting of many roots. In planting, the roots are inserted with the thumb and forefinger, about an inch over the crowns, and the bed is again protected for about three days, till its surface gets settled. As to the time of planting; roots planted in November are undoubtedly best for increase and strength, but February is the month for planting for a young show. Hereabouts there is no planting before the 14th; and, this year, some of the best growers did not plant till the 24th of the month. As soon as the shelter of mats or canvass is taken away, the bed should be covered by netting supported on hoops, which should continue till the awnings for protecting the bloom is put up. Ranunculus seed, sown in autumn (say early in November), and effectually protected from frost and wet, will produce stronger plants, and more likely to flower the second year, than spring-sown seed; although it is advisable to save some seed for spring sowing. I should have observed before, that a ranunculus bed will last two years, with only stirring the second year; observing not to go down to the dung. Rotten sheep dung, the shoveling of a sheep pen, is a good substitute for rotten cow dung, which frequently cannot be got.

Heartsease (*Vìola trícolor*) is now certainly become a florist's flower. I hope to see, in the edition of the *Encyclopædia of Gardening* now publishing, some instructions for its culture. [See VIII. 573., and *Encyclopædia of Gardening*, ed. 1834, art. *Vìola*, in the General Index.] I remain, sir, yours, &c. — *A Florist and a Reader. Wallingford, Feb.* 26. 1834.

Art. VI. *Queries and Answers.*

Cobbett's Gardening.—Sir, I should like much to see one or more of your correspondents, who are good practical kitchen-gardeners, take up the subject of Cobbett's gardening, in order that its merits may be fully discussed; and to show how far his system may be considered as applicable to, and available for, the purposes of gentlemen's gardeners. I have reason to believe that Mr. Cobbett's book has been extensively influential among the higher orders of society; and that in some instances, and perhaps not a few, it has been the means of raising disputes between gardeners and their employers. Whatever merits the book may be possessed of, it will lose nothing by a fair and candid enquiry, and its faults, whatever they may be, will not be increased. — *An Admirer of good Gardening. Feb.* 1834.

Impressions of the Leaves of Plants. (IX. 629. 719.) — Complete directions for this purpose will be found in Murray's *Book of General Knowledge*, p. 566. This work was published in 1823. — *J. G.*

Internal Temperature of the Stems of Plants. — Sir, I have a remark or two to offer, which, although they may convey no information, may, if respondents please, excite some. Mr. Gordon, in his highly ingenious paper, in the *Magazine of Natural History*, V. 121., remarks that plants, as well as animals, have the faculty of preserving a certain degree of temperature, be that of the medium in which they are placed what it may. "For instance," he remarks that "the temperature of the interior of the stem of a tree will seldom sink below 56°, although that of the atmosphere be not higher than 20°." Mr. Gordon imputes this effect, "in a great measure, to various chemical processes going on within their different organs; yet," he remarks, "it is very clear that it must arise also from other causes; for it continues to be generated, though in a less degree, even in winter, when every chemical action within the plant is almost entirely suspended." On this curious subject I regret that I have no information to communicate; it is information I seek; and, to the end of obtaining it, I would, with your permission, place under Mr. Gordon's observation the following extract from Jameson's *Philosophical Journal* for June, 1828, p. 204.: — "Schutzer and Halder inserted thermometers into the stems of trees, so deep that the bulb reached the centre of the tree. The same was done into a dead stem. From the results of these experiments, vegetables appear to retain a certain medium temperature, which cannot, however, be considered as originating from heat evolved by the functions of the plant, as the dead stem afforded the same temperature as the living; but can be satisfactorily explained by a reference to the bad conducting power of the vegetable fibre and the wood, by which the temperature of the surrounding aerial strata penetrates but slowly into the interior of the plant." To the identity of temperature in the quick and the dead, I have one empirical fact to oppose, taught me some years since by a nurseryman of much arboricultural experience, the excellent Mr. Samuel Curtis of the Glazenwood Nursery. It is, that a dead branch is invariably warmer than a live one; and that the difference is, to a practised hand, so perceptible, that he would (in summer only, I believe, though) engage to pass blindfold through the branches of a tree, and distinguish, by the difference in temperature alone, every dead branch from the living ones. He instanced this to me at the time by several examples; and I really imagined I could perceive a difference. "It stands to reason," he remarked, "that a bundle of tubes, as in the living branch, through which watery juices are perpetually circulating, should be cooler than a dead branch, in which the tubes are all destitute of watery juices." — *An Asker. May*, 1832.

Destroying Insects by Decoctions of Chamomile Flowers. — In the *Irish Gardener's Magazine* it is said, not only that decoctions, or the leaves dried and powdered, of the common chamomile (*A'nthemis nóbilis*) will destroy insects, but that "nothing contributes so much to the health of a garden as a number of chamomile plants dispersed through it. Nó green-house or hot-house should be without chamomile in a green or in a dried state; either the stalks or flowers will answer. It is a singular fact, that if a plant is drooping and apparently dying, in nine cases out of ten, it will recover, if you place a plant of chamomile near it." Have any of your readers tried the chamomile in any way as a remedy for insects in England? — *John Brown. Westerham, Kent, Feb.* 1834.

The relative Degrees of Effect on Vegetation of several Sorts of Manure. (IX. 628.) — In making a few remarks, in the way of answers to these queries, I shall arrange the manures included in the list referred to according as they appear to me to deserve precedence by their effects on vegetation, placing the most powerful or active first, and confining my remarks to those sorts of which experience enables me to speak with some degree of confidence.

1. "*Night Soil not dry.*" This, although the most disgusting of the ordinary manures, is, perhaps, the most powerful. It is not only active, but more permanent in its effects than some others of the active manures. When desiccated, or rendered dry, it is less powerful in its active qualities; these being partly neutralised by the lime used in drying it. In this shape, however, it is less repulsive in its application, and as permanent in its effects.

2. " *Pigeon or Poultry Dung*" forms a very powerful manure in raising excellent crops of turnips in the fields; but its effects will not reach through an ordinary farm rotation.

3. " *Vetches, &c., ploughed in.*" Under this article may be included all sorts of green manure. Amongst the most active plants employed as manure, I have found the [wild species of the genus] *S*inàpis, ploughed in fresh in the bottom of turnip drills, at the rate of twenty tons per acre. The produce brought by auction 12*l.*, while the rest of the field, manured with twenty tons of farm-yard dung, brought only from 9*l.* to 10*l.* per acre. Other weeds, such as nettles, thistles, ragwort, &c., produce crops superior to farm-yard dung. Potato stems, fresh ploughed in, on clover lea for wheat, I have found to produce crops exceeding by two bolls per acre in quantity, with more proportionate weight of straw, the other parts of the same field manured with farm-yard dung, but otherwise under the same circumstances. The stems from three acres of good potatoes will manure an acre for wheat to much better purpose than fifteen tons of farm-yard dung, the usual quantity allowed in that part of the rotation; clover after wheat being the crop which generally precedes fallow. Under the head of " green manure," I may mention an experiment I this year made with pea-straw converted into dung without the aid of cattle. Having something of that sort on hand, about the middle of last May, and being in want of some loads of manure to finish a potato field, I had the peas threshed at the mill, and the straw and chaff carried to the side of the potato field, and made up like a large hot-bed, giving each layer of straw an ample watering. Fermentation soon commenced; and, by the fifth day, the mass was so far decomposed as to be easily filled into the carts. The effluvium in filling was almost intolerable. It was in this state laid in the bottom of the drills; the sets of potatoes were planted above, and the earth ploughed over the whole. Notwithstanding the dry nature of the ground, and the dry state of the weather in the summer months, the part of the field manured with decomposed pea-straw yielded a better return than where farm-yard dung was applied.

4. " *Pig's Dung.*" I have found it a strong manure; but I apprehend it contains something not favourable to vegetation, if applied to any thing like excess in a recent state.

5. " *Sheep's Dung.*" When the sheep are lodged at night in winter in a fold or field, and so managed as to have to walk over the ground where they previously lay, so as to tread in the dung with their feet in going out and in, the beneficial effects will be observable for three years on the poorest soils, if dry. Eating off turnips with sheep is followed by the same result.

6. " *Horse Dung,*" very slightly fermented, I should say, might come next in order for cold lands, and cow dung for hot or dry lands; and neither the one nor the other is fugacious in its effects.

7. " *Liquid Manure*" (urine) is active and powerful, but the effects not lasting.

8. " *Soot*" might have ranked among the first kinds of manure as to activity, if applied to green crops immediately before, or during the time of rain; but soot, like liquid manure, is of an intoxicating quality, producing a rapid growth at the expense of after-crops.

9. " *Bone Dust,*" being now very popular, might have appeared earlier in the list; but, from observing a proportion of human bones, from the trenches of Leipsic and Waterloo, bleaching among others on the surface of turnip fields, I could only bring myself to make one trial before I made the discovery. Those farmers whose feelings allow them to hasten the process of converting the bones of our brave defenders into vegetable matter, may find a powerful auxiliary in bone dust, with little " expense of carriage."

10. " *Lime*" being merely a stimulant, I do not include it in the list; and I find my limits prevent me from noticing farther the other odds and ends mentioned by your correspondent. — *Archibald Gorrie. Annat Gardens, Oct.* 29. 1833.

The Value of green Vegetables as Manure was strikingly proved by me in the spring of 1833. I had a trench opened of sufficient length to receive six sets of potatoes; under three of these sets I placed green cabbage leaves; but the other three had nothing but the soil. When the crop was dug up, the plants over the cabbage leaves yielded about double the produce of the others. — *J. D. Parkes. Dartford Nursery, Jan.* 1834.

Artificial Lawns. — In answer to Mr. Thomas Woodcock, we have compiled the following from the writings of Mr. Sinclair. The finest English lawns, we are informed by Mr. Sinclair, who had more experience, as he had more science and skill, in this department, than perhaps any man of his time, with the exception of Mr. Lawson, are composed of the following grasses,— *Festùca* duriúscula, *Festùca* ovìna, *Agróstis* capillàris and vulgàris, *Avèna* flavéscens, Anthoxánthum odoràtum, Cynosùrus cristàtus, *Pòa* praténsis, *Lòlium* perénne var. tenuifòlium, *Trifòlium* rèpens and mìnus. If these seeds be sown in April, on a soil thoroughly drained, well pulverised, and properly consolidated by the roller previously to sowing, they will produce a beautiful lawn in two months; and by frequent mowing, in the course of a year, it will be undistinguishable from one of old turf. — *Cond.*

Variegated Plants. (p. 80.) — Sir, Your correspondent Mr. Rutger wishes for information as to variegated plants; how variegations are produced, and their uses, if any, in ornamental scenery. Being far from partial to such plants, I am ill qualified to comply with his wishes; but, with your permission, will do my best. The origin of variegation has, doubtless, been in some caprice of nature. Many persons attribute it to disease; in which opinion I am inclined to concur. I have never heard of any authenticated plan by which variegated seedlings could be insured, nor which could induce a self-coloured plant to bear variegated leaves. Grafting or budding is the only means with which I am acquainted for perpetuating or multiplying variegation, except in the case of a variegated species; as, for instance, *Aúcuba* japónica. Next, as to the use of variegations in ornamental scenery, I consider it very limited. When introduced into landscapes, on a large scale, they tend to destroy all repose, and to fritter away effect. The situation to which I think them best suited is the verge of a shrubbery flower-garden, where, if judiciously placed, they may harmonise with the gay tints of the flowers, and connect them with the more sombre hues of the surrounding shrubs. Variegated evergreens are useful in a winter garden, serving, in some measure, to compensate the eye for the deficiency of flowers during winter; and in small groups of shrubs on a lawn they might, if placed with judgment, be an acquisition. Most nursery catalogues furnish the names of approved variegated shrubs; but by far the handsomest, in my opinion, is the golden-edged holly. I saw, at the Clapton Nursery, while conducted by Mr. Mackay, variegated sycamores, and a numerous assortment of variegated shrubs. I believe Mr. Mackay paid much attention to them; but, not having been lately at Clapton, I do not know whether Mr. Low keeps up the collection. I am, Sir, yours, &c. — *Calycanthus. Hastings, Feb.* 1834.

Our correspondent has evidently a painter's eye, and we invite him to become a contributor on the subject of landscape-gardening; a department of the art which it is one of the great objects, of this Magazine to render familiar to the young gardener. We are convinced that there is no other mode of increasing the picturesque beauty of country residences, in conjunction with their gardenesque improvement, than that of diffusing a taste for picturesque beauty, and a knowledge of the means of producing it among practical gardeners. The time for employing landscape-gardeners at high prices is, in a great measure, gone by; as is also that of employing high-priced architects. A taste for the beautiful in nature and art is spreading widely among practical men and the middle classes of society; and we trust that in another generation these two classes will act reciprocally upon each other, so as to create a demand for beauty of every kind, and more especially in landscape-gardening and architecture everywhere; and to produce a supply among practical gardeners, builders, carpenters, and masons, as extensive as the demand. To accelerate this important result is the great object of the Gardener's Magazine, and also that of the *Magazine of Architecture.* — *Cond.*

Hedges as a Barrier against Cattle. — I know none speedier or better than the Canadian poplar (*P.* monilífera), as it forms, in a few years, an impenetrable living palisade against cattle. It should be planted eighteen inches apart, in double rows; and, when sufficiently grown, it may headed down every alternate year. — *J. Robertson. Kilkenny, Jan.* 6. 1834.

The Turin or Lombardy poplar (*P.* dilatàta) is very available for enclosing compartments for shade or shelter in a nursery or other garden, and this at a cheap rate. Plants about eight feet high, placed two, or three, or four inches asunder in the boundary lines, give, in the same year, useful shade and shelter. They were thus employed in Wood's Nursery, Huntingdon, in 1820, and probably still are. Hedges of yew were also used for the same purpose, but these are of low growth. Arbor vitæ (I think the American) is also applicable to the same object; as is proved by a hedge of it in Malcolm's Nursery at Kensington. It doubtless grows much faster than yew. — *J. D.*

A magnificent Conservatory is now erecting at Dalkeith House for the Duke of Buccleugh. — It has a dome 40 ft. in diameter, and, I am told, will cost more money than was ever before laid out for a plant-house in Scotland. The architect is Mr. Burns of Edinburgh; to whom, or to Mr. Macdonald, I would recommend you to apply for particulars. — *H. B. Gogar, Jan.* 1834.

We should be much obliged to either of the gentlemen mentioned for a description and sketches of the house alluded to. — *Cond.*

Lucombe's new Evergreen Oak. — Sir, I do not recollect seeing Lucombe's new evergreen oak noticed in any of your publications. I think it may be well recommended to form a part in planting for ornament. It is a fast grower, and assumes a handsome pyramidal appearance, considerably resembling the old Lucombe oak, but, I think, with smaller leaves, which retain their verdure throughout the winter. — *T. Rutger. Shortgrove, Feb.* 1834.

We should be glad to know where this oak can be purchased; and how, where, and when it originated? — *Cond.*

The Wicken Tree. — Can any of your Lincolnshire friends inform me to what tree this provincial term applies? I find it mentioned in the *Gentleman's Magazine.* — *T. Rivers, jun. Sawbridgeworth, Feb.* 1834.

This name may possibly be corrupted from quicken tree; and quicken tree, mountain ash, rowan tree, are three names for the *Sórbus* aucupària. — *J. D.*

Splitting the Roots of felled Trees. — Sir, In reference to J. B.'s question on splitting the roots of felled trees with gunpowder (p. 82.) I have found it to lessen the labour considerably, by preparing them to be split afterwards with wedges to the sizes wanted; and, upon the whole, I think it may be considered as economical. My method was, to bore a hole, of an inch in diameter and about six or eight inches deep, and to fill it up one third with gunpowder; and, after placing a reed filled with the powder down one side of the hole to reach the charge, and of sufficient length to stand up a little above the top, the remainder of the hole was filled up with perfectly dry sand; after which a small quantity of powder was placed on the top, in contact with the reed, and some combustible matter placed over it in such a way as, on a person firing it, sufficient time might be given for his escape. Another method was, to plug up the hole with a wooden peg, and afterwards to make a hole on one side, down to the powder, by driving down a small iron pin, or with a long gimblet of small bore; on either of which being removed, the hole was filled up with powder, and fired, as above; but, as I found filling the hole with sand to be equally efficacious, and more simple in its process, I finally preferred it. I am, Sir, yours, &c. — *T. Rutger. Shortgrove, Feb.* 1834.

Houstònia cærùlea. In answer to R. T. (p. 83.). — Houstònia cærùlea, when grown in pots, requires to be potted in a mixture consisting of half peat, one fourth light loam, and one fourth sand. The pots ought not to be over large, and should be well drained. During summer, the plants should be placed out of doors, in a situation where they are shaded from the midday sun. They should be kept rather moist, and frequently watered lightly over head. In winter, they may either be placed in a cold frame or in the greenhouse. The plants ought to be divided once or twice during every season. With this treatment, the plants grow freely and flower profusely. There must, however, be some defect in the treatment of the Houstònia, as generally practised, otherwise this beautiful little plant would not remain so scarce. When treated as a hardy border plant, it requires to be planted in a light peat soil, and to be kept rather moist; it should be occasionally divided. It requires to be narrowly observed during winter, as the frost frequently throws the plants out of the soil, when they ought to be immediately replaced; as a few hours' sun or cutting wind would completely dry up the small fibrous roots. Most of the plants of Houstònia cærùlea, which are left in the borders during winter, are killed from this cause, and not by the severity of the winter. — *E. B. March*, 1834.

Chimonánthus fràgrans. — In reply to the query of your correspondent F.F. (IX. 630.), I may state that I have found a Chimonánthus fràgrans planted in a mixture of leaf mould, peat earth, and dung, thrive exceedingly well. It is trained against a wall of a southern aspect, and has had no protection in winter since it was planted, now four years ago, except some straw pegged round the lower part of the stem. It is at present six feet high, and extends eight feet in width, and is showing most profusely for blossom. The snails were very fond of it; but by surrounding it while young by a trench of soot, I have succeeded in saving it from destruction. — *E. P. Surrey, Dec.* 1833.

To preserve any Plant from Slugs or Snails, I always throw some soot in a circle a few inches distant from the plant; and I have never found the soot injure any plant when used in that way. — *Id.*

Roses for Hedges. — I see some queries on hedges in your Magazine, and in reply I may state that I think no plant more ornamental for hedges than the *R*òsa villòsa. I have had a hedge of this species these twenty years, about 10 ft. or 8 ft. high, which is a sheet of bloom every May; and throughout the rest of the season flowers with the Boursault, Noisettes, and other hybrid China roses, which are budded on it. — *J. Robertson. Kilkenny, January* 6. 1834.

A small Caterpillar which attacks Rose Bushes. — Sir, I shall be much obliged to you if you will inform me, through the medium of your Magazine, of any method of destroying a small caterpillar, which has for the last three summers infested the rose bushes in my garden. It makes its appearance early in June; it is small, about as long as my nail, and of a yellowish-green colour; it eats away the under side of the green leaf, causing the upper side to turn brown, and appear as if it were scorched with fire; thereby disfiguring the plant exceedingly, and injuring the bloom. I take great delight in my garden; and, having been much annoyed at this continual depredation, my gardener has tried every means we can think of to get rid of it: such as putting soot in the ground, strewing the leaves with brimstone, &c., but without effect. Can you, or any of your correspondents, help us to attain our object? I am, Sir, yours, &c. — *Frances Barnard. Gosfield Hall, Essex, Feb.* 15. 1834.

Hand-picking is one of the most effectual modes; but, unfortunately, it cannot be resorted to till a great part of the mischief is done. Has not our correspondent confounded together two distinct insects? The insect which most "injures the flowers" of roses, by eating into them while in the bud, is, we believe, the caterpillar of one of the sawfly tribe. The insect which eats a ringworm-like course, that afterwards turns brown, between the two surfaces of the leaves of rose bushes, is Microsètia ruficapitélla; of whose habits a description is given in the *Entomological Magazine*, vol. i. p. 422. — *J. D.*

Have any hybrid Varieties of the various Species of Cýclamen been originated? — I have for some years past taken great pains to cross the *C.* còum and *C.* vérnum with the *C.* pérsicum and *C.* repándum; and the latter with the *C.*

pérsicum; but my hopes have always been disappointed. I can discover very little difference between *C.* còum and *C.* vérnum, with the exception of the leaf, which, in the latter, is marked something after the manner of the *C.* pérsicum. With respect to the *C.* pérsicum, there are two varieties; one marked with red at the bottom of the corolla, the other perfectly white. I have raised between forty and fifty seedlings from the latter; all of which have come with the red eye; and out of as many seedlings which I had from the variegated flower, I have never found one perfectly white. I therefore apprehend that the white is merely a scarce variety. With respect to the *C.* còum and *C.* vérnum, I have always found the seedlings come true to their respective characters.

There are, I believe, six distinct species of this genus at present known; and three or four varieties of the *C. h*ederæfòlium, and two of the *C.* pérsicum; but, if I mistake not, the Dutch, many years ago, possessed a greater number, either as species or varieties. [Twelve varieties and species, more or less distinct in flower, leaf, and habit, will be found figured in colours in Abraham Munting's *Naauwkeurige beschryving der Aadgewassen*, commonly called Munting's *Herbal;* fol. Leyden, 1696.] Notwithstanding my want of success hitherto, I do not intend to desist from my attempt to procure a variety of *C.* pérsicum, *C.* còum, and *C.* repándum, unless some of your correspondents will be good enough to state some satisfactory cause why these flowers should not mule as well as many other genera.

[Among the Primulàceæ scarcely any hybrids are known. The varieties of polyanthuses and auriculas, obtained by cross impregnations, are not direct hybrids, as they are obtained from between previously extant varieties.]

The species of *Cy̆*clamen are plants which no one having the least taste for flowers, and having the convenience of a green-house or frames, should be without. The *C.* vérnum begins to bloom in November, and the *C.* còum about the end of December, and they continue in flower for some months; the *C.* pérsicum can be made to bloom from October to June; about the latter month the *C.* europæ'um comes into flower, and this is succeeded by the *C. h*ederæfòlium: so that one or other of this pretty genus is constantly in bloom. I have known plants of the *C.* vérnum and *C.* còum to produce upwards of forty flowers each; thus enlivening the dreary months of winter with their elegant bloom. — *E. London, Jan.* 18. 1834.

Of the white-petaled variety of *C.* pérsicum there are, I believe, in cultivation a sub-variety with fragrant flowers, and one with flowers less or not at all fragrant; and of the red and white petaled variety, similar sub-varieties. A memorandum lying by us (whence copied we know not) advises us of a

C. pérsicum pétalis plùribus. " Mr. H. Jackson of Old Lakenham exhibited a fine double cyclamen, a seedling variety of the *C.* pérsicum, with the mother plant." (*Norfolk and Norwich Horticultural Show. April* 28. 1830.)

A rare kind of *Cy̆*clamen is figured as *C.* europæ'um in Sweet's *Flower-Garden*, t. 176. (? 1st series), from the collection of Mr. Knight, Chelsea; where it has borne, and may still bear, the name of *C.* hungáricum. This kind is a very interesting one, in its rarity, orbicular leaves, their redness on the subface and marbling on their surface, pretty flowers (which are not, however, that I know, prettier than those of any cyclamen), and the fragrance of these. — *J. D.*

A few Observations on the Odours of Flowers. — *I'ris pérsica* is delightfully fragrant to me; and, finding it not so to some, I, in February, 1833, submitted flowers of it to the testing of 54 individuals: 41 pronounced it delightful; 4 slightly scented; 8 devoid of scent; and 1 declared it fetid. A plant which flowered in our stove in December, 1833, was declared agreeably scented by 17, and devoid of scent by 10. Plants flowering at this time (Feb. 1834) in the borders have been pronounced fragrant by 9, and scentless by 14.

Anemòne nemoròsa I find sweetly scented, and so do 23 out of 30 persons to whose judgment I have submitted its flowers; the remaining 7 persons could not perceive the slightest fragrance.

Cýclamen pérsicum. I have heard and read a great deal about "sweet-scented varieties of this plant." I have never met with one that appeared scented to me. A fine plant exists in this garden: but neither last year nor this could I perceive any scent from it, and at least three fourths in number of the persons whom I have requested to smell it, have pronounced it delightful; but a few, like myself, could not perceive it odorous at all. — *Henry Turner. Botanic Garden, Bury St. Edmunds, Feb.* 26. 1834.

Garden Hedges either for Shade or as a Shelter for Fruit Trees. — I am surprised that I never find the evergreen oak recommended for this purpose, as, when it has established itself, it runs up speedily, bears cutting well, and never robs the borders with its taproots, as others do. — *John Robertson. Kilkenny, Jan.* 6. 1834.

Ripening Fruit. — Have gardeners come to any conclusive opinion on the efficacy of coloured walls in ripening fruit? or on the effect of inclined planes, or the geometric centre of circles for the same purpose? These are subjects which it may be hoped will attract the attention of our societies, if not already decided. — *Id.*

Disease in the Moorpark Apricot. (IX. 723.) — I do not consider the following as a full answer to the query of J. S. H., but it will go a certain way towards it. Three or four years ago, I was exceedingly mortified by losing several branches of two trees of the Moorpark apricot, and also by an indication of a still more extensive devastation thereof, by a want of rotundity and firmness in the young shoots. Being at a loss as to the cause of such a phenomenon where formerly health and fruitfulness existed, and being unable to gather from any quarter the desired information, I began to inspect rather minutely the whole of the remaining branches, and perceived near their base a flattened and darker appearance than usual. Although I could not, with the naked eye, discover any puncture, still I imagined that such might have been made; consequently, I cut into such parts as presented the above appearance, and was astonished at the quantity of living creatures which were there discovered eating the inner bark, and a part of the soft wood, or alburnum, and, withal, spreading disease for a considerable distance around them. If I remember correctly, these maggots varied from a quarter to three quarters of an inch in length, and were of a light colour. This happening in the spring, I cut away every diseased part, and applied a composition of soft soap, sulphur, and Scotch snuff, in order to destroy any remnant of the enemy, if by chance such were left behind. — *J. Smith, Gardener to Dykes Alexander, Esq. Ipswich, Jan.* 14. 1834.

ART. VII. *London Horticultural Society and Garden.*

DEC. 3. 1833. — *Read.* A statement of observations and discoveries connected with the culture of melons; by the Author of *The Domestic Gardener's Manual.* An account of the Averrhòa *Carambòla*, and particulars respecting the mode of cultivating it; by James Bateman, Esq.

Exhibited. [In our report of the objects exhibited, we omit to mention the names of many which, though objects of merit, are already well known to be so by our readers.] Búddle*a* madagascariénsis and tasseled blush Chinese chrysanthemum, from Mrs. Marryatt. Fruit of Phýsalis peruviàna, from J. Ryley, Esq. Chrysánthemum sinénse Wheeler*iànum*, and six other seedling varieties, from Mr. Isaac Wheeler, Beaumont Buildings, Oxford. Gongòr*a* atropurpùrea, and fruit of Averrhò*a* *Carambòla*, from J. Bateman, Esq. A "white-blossom" potato; from Mr. G. Hawkins, Hythe, Kent: its weight was 2 lbs. 6 oz.

Presented. Flora Batava, No. 96.; by His Majesty the King of Holland.

Read. Notes on the growth, under different circumstances, of the O'xalis crenàta; by Mr. Thomas Corbett of Maryland Point Nursery.

Exhibited. Golden pippins, true; from Mrs. General Vansittart, Binfield Lodge, Great Marlow. Specimens of tallies, from Messrs. Doulton and Watts. (See p. 164.)

From the Society's Garden. Thirty-five sorts of kitchen and table apples; Beurré Rance pears and Easter bergamot, off standard trees.

Feb. 4.— *Presented.* Cinquième Notice sur les Plantes rares cultivées dans le Jardin de Genève, par Messrs. A. and P. de Candolle; presented by the authors. Succincta Relazione del Viaggio fatto in Abruzzo dal Cavalier Tenore nell' està del 1829; presented by S. Tenore. Osservazioni e Notizie relative alle Larve pregiudicevoli alla Pianta de Gran Turco (*Zèa Màys*); presented by the author, Dr. Carlo Passerini. Osservazioni sopra alcune Larve e Tignole del' Ulivo; presented by the same author. Memoria sopra due specie d' Insetti nocivi alla Vite delle Procris ampelophaga ed all' Cavolo arboreo; presented by the same. Osservazioni sul Baco dannegiatore delle Ulive, e sulla Mosca in cui si transforma; presented by the same.

Read. A communication on a method of producing grapes from vine cuttings the first season; by Mr. John Mearns, F.H.S. A second communication from Mr. Mearns on this subject was read at the meeting on Feb. 18. Mr. Mearns has also favoured us with a description of his mode. (See p. 138.) A Report on Experiments on the comparative Growth of two Pine-Apples, by Mr. Donald Munro.

Exhibited. Apples gathered on Feb. 3., in the garden of Col. Tweedy of Bromley; communicated by T. C. Palmer, Esq. Govèn*ia* supérba, from J. Bateman, Esq. Amarýll*is* aúlica, from Sir C. Lemon, Bart. From the open ground, *A*càcia dealbàta and Raphiólepis rùbra, from Rev. T. Garnier. From Messrs. Chandler, these varieties of Camèll*ia* japónica,—eclipse, punctàta or invincible, *R*òsa múndi, Park's rose-striped, *a*lthææflòra, and carnation Waratah. A splendid plant of Cèreus speciosíssimus, from the open border, from Mrs. Lawrence.

Also, from the Garden of the Society. Apples (the best of these apples for the table are marked *; for kitchen use †; all of them have been frequently remarked upon): †Alfriston, *Cockle pippin; *Braddick's nonpareil, very abundant bearer; Tulip, †French crab, Reinette Diel; Calville malingre, a great bearer; Baxter's pearmain, *Scarlet nonpareil, *Court pendu plat, *Golden Harvey, Belledge, *†London pippin, *Reinette du Canada, †Royal russet, †Hormead pearmain, *Robinson's pippin, Royal reinette, †Bedfordshire foundling, *New rock pippin, *†Burn's seedling, Rose de China, †Brabant bellefleur, Norfolk Paradise, Rhode Island greening, Black crab, Martin nonpareil, Hay's incomparable, Red everlasting, American black. Beurré rance pears, from standards. Lord Bagot's seedling pine-apple. Flowers: Justíc*ia Adhátoda*, E'pacris purpuráscens, Prímula præ'nitens, *A*càcia dealbàta, from the open air; *I*'ris tuberòsa, *A*mýgdalus macrocárpa; *P*rùnus sibírica, cerasífera, Pseùdo-*C*érasus; *A*'rbutus *A*ndráchne, Camèll*ia* sp. Capt. Drummond, and the following varieties of C. japónica,— élegans, imbricàta, Aitòn*ia*, *R*òsa sinénsis, carnation Waratah, double white, spléndens.

Feb. 18.— Presented by G. Bentham, Esq., secretary, vols. i. and ii. of the Dictionnaire du Bon Jardinier, and Catalogues of the Trees, Shrubs, &c., in the Nurseries of Messrs. Audibert of Tarascon. By the author, Recherches anatomiques et physiologiques sur le Marchánt*ia* polymórpha, par M. Mirbel. Tomes i. ii. and iii. du Cours de Culture et de Naturalisation des Végétaux, par A. Thouin.

Read. A communication on the management of bark-beds, by Mr. John Jackson. A programme of the regulations to be observed at the ensuing exhibitions at the Society's garden. These are announced to take place at the garden, for the exhibition of choice specimens of fruit or flowers, on the four following days, May 10., June 7., July 5., September 13.; to these exhibitions all persons, whether fellows of the Society or not, are invited to contribute.

Exhibited. Camèll*ia* reticulàta, from Messrs. Chandler and J. Allnutt, Esq.

Pròtea speciòsa; *A*càcia dealbàta, strícta, sp.; Strelítz*ia* regínæ, Astrapæ'a Wallích*ii*, *A*nemòne horténsis, a species of Tropæ'olum, Newtown pippins and specimens of flower-glasses from Mrs. Marryatt. A hybrid amaryllis, from between A. Johnsòn*i* and A. pulverulénta; from Sir A. Hume, Bart. Tubers of the Batavian potato, from H. Hollist, Esq.

Also, from the Society's Garden. Apples: New rock pippin, a very good dessert apple, a seedling from the Newtown pippin; Rose de China; Rother Borsdorffer, not of much merit in this climate, nor are any of the the Borsdorffers, compared with what they possess in Germany; Norfolk beaufin, Grey queening, Royal russet, Winter queening; London pippin, Baxter's pearmain, Dutch mignonne, Court pendu plat, Cockle pippin, these have frequently been remarked upon as good apples; Reinette Diel, Morden round, Grange's pearmain, Braddick's nonpareil, a very abundant bearer; Green nonpareil, scarcely equal to the Old nonpareil; Yorkshire greening, Pomme violet, French crab, Scarlet nonpareil, American black, Bedfordshire foundling, Belledge; Red everlasting, one of Mr. Braddick's apples, from America, showy, but not rich. Pears: Beurré rance, from a standard; Winter bon Chrétien, from a wall. Flowers: Gastòn*ia* palmàta; *A*càcia dealbàta, from the open air; Azàlea índica hýbrida, Oncídium carthaginénse; the following varieties of Caméll*ia* japónica, — imbricàta, Colvílli, double white, élegans, *p*apaveràcea, prínceps, carnation Waratah, spléndens, sp. Capt. Drummond; *Bérberis A*quifòlium, *I*'ris tuberòsa.

For Distribution at the Meeting. Cuttings of Early purple Guigne cherry; Thompson's pear, a sort received originally from Belgium, without a name, about the size of a Passe-Colmar, of excellent flavour, ripe in December. It is undoubtedly a new sort, and likely to be quite free from canker; and is a good bearer.

March 4. — *Read.* An account of some experiments made in the garden of the Society with a view to ascertain the relative productiveness of the tubers and sets of potatoes, by Dr. Lindley.

Exhibited. Royal nonpareil, William Shakspeare, Duke of Gloucester, and Golden Harvey apples, and Hardenpont pears, from Thomas Hunt, Esq. Six sorts of camellias, and a seedling sort, said to be sweet-scented, from Mr. Steel of Richmond. Flowers of camellias, *R*hododéndron arbòreum álbum, *R.* álbum hýbridum, and *A*càcia verticillàta, from William Wells, Esq. *Bérberis*, a new simple-leafed species of, from Chile, from Mr. Joseph Knight. Caméll*ia* Rawes*iàna*, and a seedling from C. japónica spléndens, from J. Allnutt, Esq.

From the Garden of the Society. Fifteen kinds of apples, on two of which, the Yorkshire greening and Northern greening, there was this remark attached by Mr. Thompson: — These two good sorts of kitchen apple are often confused. The Northern greening is the soundest keeping kind; it has often a projection at the base, like the lemon pippin, but its flesh is very different, being crisp with a brisk acid juice. Flowers: the following varieties of Caméll*ia* japónica, — imbricàta, spléndens, Young's seedling, Aitòn*ia*, Chándler*i*, Párks*ii*, *R*òsa sinénsis, carnation Waratah, corállina, prínceps, *p*apaveràcea, large semidouble Waratah, decòra, élegans, double white, *m*aliflòra; *Rìbes* punctàtum, *Bérberis A*quifòlium, *L*eucòjum pulchéllum, *I*'ris tuberòsa, *O*rnithógalum nùtans, Begòn*ia h*eraclei*fòlium*, *E*rìca *P*ezìza and tróssula, E'pacris paludòsa and pulchélla, Echevèr*ia* gibbiflòra, Azàlea índica phœnícea and índica hýbrida. Cuttings of the following kinds of pears were sent for distribution, — Beurré Bosc, an abundant bearer as a standard; Comte de Lamy, a hardy, not very large, but very rich autumn pear, excellent as a standard: Monarch, Beurré rance, Bon Chrétien fondant, quite melting and cool; Grumkower Winterbirne. This last sort was originally received from Dr. Adrian Diel of Nassau Dietz. It was discovered at Grumkow, near Rügenwalde, in the further or Prussian Pomerania (Hinterpommern), about three miles from the Baltic. It has proved to be a very good pear, even on a standard in the garden. Size rather large, with yellow buttery flesh.

ART. VIII. *Covent Garden Market.*

	From			To		
	£	s.	d.	£	s.	d.
The Cabbage Tribe.						
Cabbage, per dozen:						
White - - - -	0	1	3	0	1	6
Red - - - -	0	2	6	0	4	0
Plants or Coleworts -	0	1	6	0	2	6
Brussels Sprouts, per ½ sieve	0	1	6	0	2	6
Broccoli, per bunch:						
White - - -	0	0	8	0	2	0
Purple - - - -	0	0	6	0	1	6
Legumes.						
Kidneybeans, forced, per hundred - -	0	1	6	0	2	6
Tubers and Roots.						
Potatoes - per ton -	4	10	0	5	0	0
Potatoes - per cwt. -	0	4	6	0	5	0
Potatoes - per bushel	0	2	3	0	2	6
Kidney - - - -	0	2	6	0	3	0
Scotch - - - -	0	2	3	0	2	6
New, per pound - -	0	1	6	0	2	0
Jerusalem Artichokes, per half sieve - - -	0	1	0	0	1	3
Turnips, White - -	0	0	1	0	0	2
Carrots, per bunch:						
Old - - - -	0	0	4	0	0	5
Horn - - - -	0	0	8	0	0	0
Parsneps, per dozen -	0	0	8	0	1	0
Red Beet, per dozen - -	0	0	9	0	1	6
Skirret, per bunch - -	0	1	0	0	1	6
Scorzonera, per bundle -	0	0	9	0	1	3
Salsify, per bunch - -	0	0	9	0	1	3
Horseradish, per bundle -	0	2	6	0	6	0
Radishes:						
Red, per dozen hands (24 to 30 each) - -	0	0	9	0	1	6
White Turnip, per bunch	0	0	3	0	0	0
The Spinach Tribe.						
Spinach per sieve -	0	1	0	0	1	3
Spinach per half sieve -	0	0	6	0	0	9
Sorrel, per half sieve -	0	1	0	0	0	0
The Onion Tribe.						
Onions:						
Old, per bushel - -	0	2	6	0	3	6
Ciboules, green, per bunch	0	0	3	0	0	0
Leeks, per dozen bunches -	0	0	8	0	1	0
Chives, per dozen roots -	0	0	9	0	1	0
Garlic, per pound - -	0	0	6	0	0	8
Shallots, per pound -	0	0	8	0	1	0
Asparaginous Plants, Salads, &c.						
Asparagus, per hundred:						
Large - - - -	0	8	0	0	12	0
Middling - -	0	5	0	0	6	0
Small - - - - -	0	2	6	0	4	0
Sea-kale, per punnet -	0	1	6	0	2	6
Cardoons, per bunch (three)	0	3	0	0	6	0
Lettuce, per score:						
Cos - - - -	0	1	3	0	2	0
Cabbage - - - -	0	0	4	0	0	6

	From			To		
	£	s.	d.	£	s.	d.
Endive, per score - -	0	1	6	0	2	6
Celery, per bundle (12 to 15)	0	0	6	0	1	6
Small Salads, per punnet -	0	0	2	0	0	3
Watercress, per dozen small bunches - -	0	0	6	0	0	9
Burnet, per bunch - -	0	0	2	0	0	0
Pot and Sweet Herbs.						
Parsley, per half sieve -	0	1	6	0	2	6
Tarragon, per dozen bunches	0	6	0	0	0	0
Dried - - -	0	0	0	0	2	6
Fennel, per dozen bunches -	0	2	0	0	0	0
Thyme, per dozen bunches	0	0	0	0	2	6
Sage, per dozen bunches -	0	0	0	0	2	6
Mint, per dozen bunches -	0	4	0	0	0	0
Peppermint, dried, per dozen bunches - - -	0	1	0	0	0	0
Marjoram, dried, per doz. bun.	0	1	0	0	0	0
Savory, per dozen bunches -	0	1	0	0	0	0
Basil, dried, per dozen bunch.	0	1	3	0	0	0
Rosemary, per dozen bunches	0	0	0	0	3	6
Lavender, dried, per doz. bun.	0	2	6	0	0	0
Tansy, dried, per doz. bunches	0	1	0	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Rhubarb Stalks, per bundle	0	0	9	0	1	6
Edible Fungi and Fuci.						
Mushrooms, per pottle -	0	0	6	0	0	9
Morels, per pound - -	1	1	0	0	0	0
Truffles, per pound:						
English - - -	0	14	0	0	0	0
Foreign - - - -	0	14	0	0	0	0
Fruits.						
Apples, Dessert, per bushel:						
Nonpareils - - -	1	0	0	2	10	0
Newtown Pippins -	0	10	0	0	12	0
Baking, per bushel - -	0	6	0	0	12	0
American - - -	0	10	0	0	12	0
French - - -	0	5	0	0	8	0
Pears, Dessert, per dozen:						
Bon Chrétien - -	0	4	0	0	6	0
Almonds, per peck - -	0	8	0	0	0	0
Strawberries, forced, per oz.	0	2	6	0	3	0
Chestnuts, French, per peck	0	3	0	0	5	0
Pine-apples, per pound -	0	8	0	0	12	0
Grapes, per pound:						
Hot-house - - -	1	10	0	1	15	0
Portugal, White - -	0	0	10	0	1	3
Red - - -	0	1	6	0	2	0
Cucumbers, frame, per brace	0	2	6	0	10	0
Oranges per dozen - -	0	1	0	0	3	0
Oranges per hundred -	0	6	0	1	0	0
Bitter Oranges - -	0	10	0	1	0	0
Lemons per dozen - -	0	0	9	0	2	0
Lemons per hundred -	0	6	0	0	16	0
Sweet Almonds, per pound	0	2	3	0	0	0
Brazil Nuts, per bushel -	0	12	0	0	16	0
Spanish Nuts, per peck -	0	4	0	0	0	0
Barcelona Nuts, per peck -	0	5	0	0	0	0

Observations.— The weather, since the last report, having continued fine and open, little interruption has taken place in our general supplies, which have been regular, and quite equal to the demand. To the present period the season has been unusually mild, without the slightest interruption from frost; so that the growers have been enabled to carry on their operations at the least possible expense or difficulty. They, however, still complain of the want of encouragement in the shape of demand and good prices for many of their articles (which cannot be produced but at considerable expense), such as asparagus, sea-kale, &c. It will, however, I think, be found that these articles are now supplied in so much greater abundance, from the increased cultivation of them, that the produce must necessarily be disposed of at less prices, comparatively, to allow the public to consume them extensively; whereas heretofore they have been considered so exclusively articles of indulgence as to be confined to the tables of the rich. They are now more generally consumed, but certainly at less nominal cost. Rhubarb is now so generally and so extensively cultivated, as to form, at this season, one of the leading articles; and, from the strenuous competition, many fine early varieties are to be observed, from the natural ground, almost superseding the forcing of it after this period. Of early cabbages we have had as yet but few; but, when we consider the early season, it is extraordinary to observe them of such excellent quality and at such moderate prices. Of broccolis the supply has been limited within the last two or three weeks, the later varieties having already been forced into the market by the extreme mildness of the season. It is only on the retentive soils that any can be preserved for the present and ensuing months. It has been heretofore usual to have an abundance up to the time for early cauliflowers in May and June. Radishes from the open ground are plentiful, allowing but little opportunity for the disposal of the forced, which has been our usual source of supply during the months of March and April. A great many run coleworts have been brought to market during the last month, so that a large surface of soil must have been cleared, which will, I think, render our supplies during the months of April and May rather short, unless peas should be furnished at a much earlier period than usual, which, from the continued improvement in the sorts now generally cultivated, and the openness of the weather, may be confidently anticipated. I have heard of many being already in bloom, which is extraordinarily early. Considerable fears are entertained for the crop of fruit, owing to the precocious state of the season, many of the early varieties of pears and plums being already in full bloom. Of all other articles the supplies have been generally good; and from the river having been uninterruptedly open, potatoes have come to hand in tolerable abundance, and at prices little varying from the former report. Our stock of apples continues good, with a promise of regular supplies for some time to come, which will of course supersede the necessity of importation; a few cargoes only have been brought in, the duty of 4*s*. per bushel almost excluding the commoner varieties. Of American apples we have had a large importation, from time to time, during the season, some few of excellent quality, the greater part in bad condition. The Newtown pippin is at all times a tender apple, and requires to be picked carefully and packed very securely, to insure a chance of success in getting it here in good condition. — *G. C.*

Art. IX. *Obituary.*

Died, at New Cross Nursery, Deptford, March 13., *Mr. George Sinclair*, F.L.S., H.S., &c., nurseryman, in the forty-eighth year of his age. Mr. Sinclair was many years gardener to the Duke of Bedford, at Woburn Abbey, and conducted there, under the direction of Sir Humphry Davy, an extensive series of experiments to determine the nutritive powers of the British grasses and herbage plants. It was there also that Mr. Sinclair composed the *Hortus Gramineus Woburnensis*, a national work, which embodies the results of the experiments alluded to, and is the most important of its kind that ever was published. Mr. Sinclair was also the author of various other publications or articles, the last of which, we believe, was the *Treatise on useful and ornamental Planting*, published by the Society for the Diffusion of Useful Knowledge. In the history of British agriculture, the name of George Sinclair will hold a conspicuous station in all future times, as the introducer of a new and improved system of laying down lands in grass. Mr. Sinclair had a considerable knowledge of chemistry, and was a good vegetable physiologist; hence all that he wrote bore a character of scientific enquiry, as well as of practical skill. As a man, few stood higher in our estimation; and it may be truly said, that he was esteemed and beloved by all who knew him. His early death, we believe, may be chiefly attributed to the profound grief which preyed on him after being suddenly bereaved of an only daughter, who died in April, 1833, about the same time that Mr. Sinclair lost his father and his uncle. (See IX. 512.)

THE

GARDENER'S MAGAZINE,

MAY, 1834.

ORIGINAL COMMUNICATIONS.

Art. I. *Notes on Gardens and Country Seats, visited, from July 27. to September 16., during a Tour through Part of Middlesex, Berkshire, Buckinghamshire, Oxfordshire, Wiltshire, Dorsetshire, Hampshire, Sussex, and Kent.* By the Conductor.

(*Continued from* p. 119.)

Littlecot Park, General Popham.—*Aug.* 16. This is a fine old place of the sixteenth century, with both the house and the grounds in perfect preservation. Taking it altogether, we hardly know of such another: Wroxton, near Banbury, bears a remote resemblance to it. The house lies in a deep secluded bottom on the river Kennet, enclosed by walled gardens; which are surrounded by a park consisting of high ground under turf, and laid out in avenues and lines, chiefly of elms and beeches, in the geometrical style. The approach-road forms an avenue of elms 30 ft. wide and a furlong in length, which brings the stranger to the enriched iron gates in front of the venerable mansion. It is characterised by high roofs covered with tiles, by various gable-ends projecting from them, and by magnificent cathedral-like windows, reaching from the ground to the eaves. The entrance is through iron gates and palisading, to a circular platform; to the right and left of which are flower-gardens and shrubberies, planted with shrubs and flowers now considered common, but kept in the very highest order. At the west end of one of these gardens is a raised platform, or terrace, from which the park and all the pleasure-gardens are overlooked. Having obtained permission from the general to see the place, we passed on to the kitchen-garden. In this garden, the first things which we observed were glass frames, in M. Lindegaard's manner, for ripening peaches and nectarines against the walls, without fire-heat. These frames occasion very little trouble; and the fruit comes in between the forced peaches and those ripened on the open wall. There are a number of hot-houses and pits, in which pine-apples, melons, and other articles are admirably grown. On one wall there are several apricot trees, which, Mr. Groom, the gardener, informed us, the general considered to be as old as the place: they bear abundantly every year. A branch of the river Kennet passes through the lower part of the garden, in a straight walled canal: thus affording an opportunity of growing excellent watercresses, and of keeping crawfish, eels, and other fish in stews. There is a pond for carp, surrounded by a rockwork or ridge of flints, planted with strawberries, the fruit of which ripens a fortnight or three weeks sooner than that in the open garden.

This is one of the very few places which we have seen which come entirely up to our ideas of high order and keeping, even to the melon-ground and the back sheds. The walks in the flower-gardens are chiefly of turf, and the flower-beds are brimful of soil; so that the line carried round them, though distinct, is perfectly soft and delicate. The grass is smoothly mown; and the decayed flowers are pinched off daily by women. The general not only allows as many men and women to be employed as are necessary to keep the place in perfect order, but he pays the men 3*s.* a week more than is given in the neighbourhood, and allows half-wages during sickness. The gardener here, Mr. Groom, is the son of the gardener to Sir Charles Cockerell, at Seisincote, Gloucestershire: a place which we saw in 1806, when it was highly kept; and which, we are informed, still continues to be one of the best kept places in England. The readers of Sir Walter Scott's works will, no doubt, recollect the singular tradition which he mentions respecting Littlecot Park. The story is related at length in the *Beauties of England and Wales;* and the room in which the tragical scene took place is said to be still in existence.

(*To be continued.*)

ART. II. *Notices of some Country Seats in the North-Eastern Counties of England.* By G. W.

(*Continued from* p. 122.)

WHITE HILL, near Chester le Street, is the seat of John Cookson, Esq., who succeeded to the estates on the demise of his father, Isaac Cookson, Esq., in 1832. That liberal patron of gardening lived for more than half a century at this delightful place; and to him it is indebted for the many great improvements that were made in it under the management of his indefatigable gardener, Mr. Crossling. The road, for half a mile from Chester le Street to the end of the approach, is one of the most picturesque imaginable: it winds up a valley, occasionally intersected by a considerable brook. The inhabitants of Chester le Street have their gardens tastefully laid out on the sloping banks of this brook, which are called "Bishop's waste;" and are let for the small acknowledgment of a sixpence or a shilling yearly. I have often been delighted, in the summer evenings, to observe industrious mechanics and their families amusing themselves in their little gardens: some engaged in rearing those wholesome vegetables so necessary for the comfort of their families; others trying to excel in the cultivation of auriculas, polyanthuses, stocks, rockets, hollyhocks, &c. I have seldom seen better vegetables, fruits, and flowers grown than in these small gardens; and the only reason I can assign for this is, the desire which each has to surpass the others. The principal objects in the view from White Hill house, which is situated on an eminence, are, the towering steeple of Chester le Street church, and Lambton and Lumley castles. The appearance of the latter is peculiarly grand. The pleasure-ground is suitable to the house, and is well embellished with clumps of various dimensions. The south front and west side are partly covered with a metal trelliswork entwined with China roses, having other kinds budded on them; and a very large arbutus projects from a wall that connects the house and conservatory. A splendid specimen of *Araucària* excélsa, which is planted in the middle of the conservatory, is an object of great attraction to visiters. The principal approach is on the north front, near to the margin of a very deep valley, with Chester le Street brook rolling along its pebbly bed. After the eye has glanced from this valley, a rich agricultural country opens to view, with the township of Pelton in the distance. The kitchen-garden is a parallelogram, enclosing two acres, and having one on the outside. There is a very neat green-house, with a good collection of pelargoniums; having 60 ft. of vinery at one end, and 120 ft. of vinery and peach-house at the other. A movable peach-house, 30 ft. in length and 6 ft. in breadth, is placed against one of the best peach and nectarine walls in the north of England. This wall has a metal coping, projecting several inches, which answers very well as a protection to the trees. In an east slip there is a flued pit for melons, surrounded by a yew hedge 4 ft. high and 2 ft. thick in front; the ends sloping to the back, which is 7 ft. high: this hedge is universally admired, owing to the neat manner in which it is kept. Mr. Crossling has been upwards of twenty years head gardener; and, in all the departments of his profession, can seldom be equalled. He is a very successful grape and peach grower, having had them ripe in March. The garden, pleasure-ground, and, indeed, every part of these grounds, be it ever so obscure, are always in the highest order and keeping. The cause of this is, Mr. Crossling's systematic method of apportioning the work, and doing every thing when it ought to be done. Well do I recollect the expression he used to make use of: that "a garden well kept was easily kept." It was his practice to hoe quarters planted with vegetables soon after they were put in the ground, which not only destroyed all seed-weeds in their germinating state, but loosened the soil, and admitted heat and air to penetrate to the roots of the plants; thus accelerating their growth. Many gardeners never think of applying the hoe and rake to a piece of ground until it is completely covered with weeds; and, often, not before these have shed their seed: if they would think of the old proverb, that "a stitch in time saves nine," they would not be so dilatory. The length of time it takes to clean a quarter overrun with weeds, and one with the weeds scarcely making their appearance, must be obvious to every one; not taking into account the crop that will soon make its appearance if the weeds have seeded. White Hill is (for, I understand, the present proprietor is following the example of his father) one of the best kept places in England: for my part, I have seen none equal to it. In most places in the north of England, assistants and garden labourers have from four o'clock on the Saturday afternoon to themselves, as an equivalent for the half hour they work over the ten hours during the week: at White Hill the regulation was, to drop work at five o'clock P. M. during the week, except on Saturdays, when the labourers left off at three. This regulation, so beneficial to the assistants, in place of increasing work, diminished it. Mr. Crossling, who is one of the best of masters, and who is universally respected, used to say, that men, if they employed their time well, might do as much work in nine hours and a half as in ten hours and a half, the usual period. There is one disinterested trait in his behaviour to his young men which I cannot let pass unnoticed, particularly as it regards a practice in all places of any magnitude in his neighbourhood: that is, never exacting any premiums from them, notwithstanding their wages, privileges, &c., are as good as any in their vicinity, and their opportunities of acquiring a knowledge of their profession a great deal superior; for never did a master pay more attention to instruct men, provided their conduct is worthy of it, than he does.

Lumley Castle, built in the reign of Edward I., is situated on the brow of a hill, commanding views over a well-wooded valley of the first description. The principal drive leads to the west front; the ascent to the great entrance-hall is by two divisions of stairs, parallel with the building, forming a spacious resting-place before entering. From this is seen the river Wear, formed into a beautiful sheet of water by means of a dam. Half a mile farther is the town of Chester le Street, with its ancient church and lofty spire, the highest in the north of England. In one side of the church, which was built prior to the castle, are the statues of many of the forefathers of the Lumleys; likewise that of St. Cuthbert, whose remains had lain here 115 years, when the monks, expelled by the Danes, fled with them to Ripon. Lumley Castle is a quadrangular edifice, with four majestic octangular towers; remarkable for being the resting-place of James I. of Scotland, on his way to ascend the throne of England. The castle is seen from the great London road for five miles, and is much admired by travellers. This noble building has not been inhabited by any of the proprietors, the Earls of Scarborough, for thirty years. The garden, which is small, is situated in a valley to the east of the castle; and has been let for many years to Mr. Earl, who, besides being a good gardener, is also a florist.

Staffordshire, Nov. 1833. G. W.

Art. III. *Observations on the Landscape-Gardening of Germany, as compared with that of England.* By the Chevalier Charles Sckell, Director-General of Gardens in the Kingdom of Bavaria.

I have read, with much gratification, the notices, in several Numbers of your Magazine, of our gardens here, and our management of them. The manner in which you express yourself is indeed very flattering; and I should say that you had done our gardens and our art too much honour, had I not conceived that I found, in the opinions of several foreigners who have visited us, and particularly of your own countrymen, in some measure, the confirmation of your views, particularly with regard to our gardens in the natural style. This favourable judgment may be readily adopted, without disparagement to the English gardens, as the two styles of gardening are, in my opinion, essentially different.

When I speak of the English style of gardening, I mean only as it is exhibited in the grand and beautiful specimens which Brown, Kent, and a few others, have left us; not that which, in these latter times, is so often practised in laying out garden grounds in England, and which has as little relation to the truly creative art of gardening, as the pictures of our modern painters have to the works of Raphael.

Considered with respect to real landscape beauties, picturesque effects, and grand imaginative characteristics, the English garden style is, in the present times, markedly retrograde. When I was in England, in 1817, I found the gardens in the new English style, as I met with it, for the most part oppressed with the burthen of their own ornaments. The immense multitudes of plants which, since the commencement of the present century, have been brought from all parts of the world to Europe, and more especially to England, supplies the landscape-gardener with an inexhaustible fund for decorating his grounds. There are thus to be found numerous varieties of trees and shrubs, which, either by their elegant growth, the picturesque disposition of their branches and foliage, or by their beautiful flowers, belong to the first class of ornaments for landscape-gardening. The palette of the landscape-painter, if I may so express myself, is now loaded with such a mass of colours and tints, that his means are superabundant, compared with the work of art which he has to create. That picturesque keeping, those rich ornaments, and those magic charms, whereby the scenes of the landscape-garden are distinguished from natural landscape, all afford resources of which the landscape-gardener is enabled to avail himself; and these have become so multiplied (for, compared with those known even in Brown's time, they are increased tenfold), that the artist-gardener is really involved in great embarrassment, to prevent the superabundance of forms and colours, which he finds at his command, from presenting a painful confusion of objects, instead of uniting to form a perfect and beautiful whole.

It might have been supposed that this richness of vegetation would be highly advantageous to landscape-gardening in England, where, formerly, the most classical models of the natural garden style were to be found; and that it would have given immensely increased facilities to the artist for the execution of his work: but, according to my experience, as I have already stated, I found quite the contrary. Amidst the disproportionate abundance of his materials, the artist knows not which to take first: one is scarcely chosen, when he is attracted to another; then to a third, a fourth, and so on. Each tree, and each shrub, has some particular charm to recommend it, and, finally, that none may be lost, he grasps them all.

Thus I found the English gardens a real chaos of unconnected beauties. Shrub adjoined shrub, and tree approached tree; but, instead of being disposed in grand masses, the separate kinds were brought together only in small groups, as if the given space, extensive as it might be, could contain plantations of every species of plant. In such gardens, picturesque beauty is sacrificed to a wilderness of forms and colours, and the result is only an immense mosaic. Simplicity, the foundation of true beauty, is entirely lost: the elevated grandeur of form, the delightful distribution of varied colouring, the magical interchange of tints, the delicate transitions from light to shade, from the bright glowing objects of the parterre to the dark groves of deep retiring plantations, no longer appear; for these effects can only be produced by the employment of trees and shrubs corresponding in kind. England has lost all that had raised gardening to the rank of a fine art; and even the old beautiful models of gardening in the natural style, I found, had been compelled, in obedience to modern taste, to draw the veil of fashionable ornament over their original charms.

Such, at least, was the state in which English gardening appeared to me, when I saw it in practice some fifteen years ago: whether there is now a return to the former simplicity; whether the employment of the new productions of foreign regions has been directed with more æsthetic [exalted] judgment, and with a more artist-like feeling of the beautiful; in a word, whether the noble simplicity of the old masters is again in vogue, I know not; but I most earnestly wish it to be so. If I have been far from estimating our Munich gardens in point of art above the English, it must be regarded as only conditionally; for I repeat that here the question is respecting the grand works of the early period, and not the later productions of modern confusion in the gardening style. The former only were the sublime examples whereby the artist who created the great structures of art here was guided. These were the examples which were always in his mind as guides, in the path he had cut out for himself, for carrying the early taste in English gardening to perfection, and thus creating a new style, which I call the German, and consider the foundation of classical garden art.

That thus our German landscape-garden style, though built on the English, as the English was on the Chinese [?], is yet, in its best models, essentially distinct from the English, is what I shall here endeavour farther to illustrate.

The old English garden style, even at the period when it was most flourishing, was always exposed to the reproach of a too great simplicity, and too little alternation in its pictures, scenes, forms, and colours; and this reproach, which was perhaps correct, had reference to some of the greatest works of the kind. The wish to avoid these faults may be the main cause why, at a more recent period, the English garden became so superfluously overloaded with petty forms, and too great a variety of plantations and flower ornaments; as, in avoiding one error, a greater is often committed. In this respect, I can say, with confidence, that we Germans have been fortunate. Whether it is to be accounted for by our not having within our power the endless variety of plants which the English gardener possesses, many of which cannot be grown in our soil and climate, or by more correct views having guided our gardeners, I do not pretend to determine.

Be this, however, as it may, I believe I can venture to assert that the true German garden style exhibits, in its classical purity, a just medium between the too great simplicity and excessive ornament of English gardens: but that here I only mean the best of our German gardens, the number of which is yet too small, is what I scarcely need to mention; for our Germany has also an abundance of abortions in what, either here or in England, may be called "symmetrical order made gardens."

Simplicity without monotony, and richness without superfluity, indicate the genuine German garden style; and thus give the German garden a place between the old and the new English. Another and yet more essential distinction is found in the appropriate distribution of the several kinds of trees and shrubs, particularly in respect to the colour of their foliage, the structure of their leaves, their size, and the form of their growth.

Had you, Sir, been here at any other period of the year than the latter end of it; had you, for instance, viewed our gardens in the month of May or September, you would, I think, have admired the manner in which they are planted; the artistical calculation exercised in the employment of colours, and forms, and transitions, and contrasts; and the judicious consideration, everywhere visible, of the character of the trees, as to their capability of producing a cheerful or a grave, a grand or a mysterious, impression, according as the garden scene, the architectural subject, or any particular natural accident, might require such character. Had you seen these in their full perfection, you would, I think, have found a much greater peculiarity in the formation of our gardens than you then observed.

The essence of that peculiarity is, however, very difficult to be pointed out to any one who has not seen an example of it. Nevertheless, it is explained, as far as a subject can be explained which depends so much upon the feelings of the artist, in the *Beyträgen der bildenden Gartenkunst*, von L. Friedr. von Sckell, München, 1823; a work which is well known to you.

Munich, July, 1833. SCKELL.

ART. IV. *Remarks on the Leafing of Oak Trees, and the Tints of the early Foliage.* By the Rev. W. T. BREE, A.M.

THE most inattentive observer can hardly fail to have remarked that there is a very considerable difference (a difference, perhaps, of not less than a month or six weeks) in the period at which different individuals of the same species of oak (*Quércus Ròbur*) expand and shed their leaves: those, of course, which assume their foliage earliest in the spring, losing it earliest in the autumn; and *vice versâ.* Accordingly, it is very common to see one oak tree in full verdure, while its next neighbour, only a few yards distant in the same wood or hedgerow, is perfectly bare, or, at most, with its buds only bursting. It is an equally obvious remark, that these trees vary no less in the tints which they exhibit on first coming into leaf; and, again, nearly as much so when they are preparing to lay aside their honours in the autumn. "The budding oak," says Gilpin, "displays great variety." Of the vernal tints, which, if not so rich and luxuriant in the eye of the painter, are yet exceedingly tender and beautiful, some are of a delicate green, others rich brown, yellow, bright sulphur-coloured, red almost approaching to scarlet, with innumerable intermediate gradations of colour. It strikes me that these obvious facts might be turned to good account by the planter, whether his chief object in planting be profit or ornament. If there be any truth in the received opinion, that, "of trees of the same species, those which expand their leaves last in the spring, and shed them last in the autumn, afford the best timber," it would surely be worth any one's while, who plants for profit, to select his oaks accordingly. Again, in mere ornamental planting, much advantage might result from paying attention to the different tints exhibited by the foliage, respectively, both in spring and autumn. It is easy to conceive the happy effect which might be produced either by harmoniously grouping together individuals of the same hues in their early foliage, or by judiciously contrasting those of different ones. A whole grove or avenue might be formed, which, at that most interesting season of the year, when the leaves are yet tender, should display, throughout its entire extent, a regular series of graduated tints, or any other combination of colour, according to the taste or fancy of the planter; and a corresponding effect would, if I mistake not, be visible also in the autumn. In one part of the park or pleasure-ground it may be desirable that a particular spot should be occupied by oaks which come into leaf the earliest of their kind; while, in another, it may be no less an object to introduce such as retain their leaves to the latest period in the autumn. Even in the case of single trees, it may, according to circumstances, be of some importance to the landscape, whether the one selected for a particular situation be early or late in its period of leafing, of one colour or another. Innumerable, in short, are the arrangements, the agreeable contrasts and combinations, which might be formed by paying attention to the above circumstances. I do not pretend to lay down precise rules for the guidance of the planter; I merely throw out a few hints, in the hope of drawing attention to an interesting subject, which appears to me to have been more neglected than it deserves.* With most planters, and, I believe I may say, with all nurserymen, oaks are oaks, and that is all: no regard whatever is had to the individual varieties of our native oak, unless, indeed, these be of a very marked and unusual character. Now, if there were a call, on the part of purchasers, for the early or the late leafing varieties, or for those of this or that particular tint or form of foliage, nurserymen would soon learn to sort their oaks accordingly, in order to meet the demand of their customers; or planters, by sowing the acorns and raising their own oaks, might adopt the same method themselves. Nothing could be easier than to do this; for the oak is a tree which developes the peculiar characters which I have above alluded to, at a very early stage of its existence; even the very first season it springs from the acorn, as will be obvious to any one who will but examine a seed-bed when the young trees are first coming up in the spring. There he will see some in broad foliage, while others are only just emerging above the ground. Every variation of colour, also, will be perceptible, as much as in trees of mature age; and these peculiarities, it is to be observed, are constant in the individuals, and are retained throughout life: as is the infant seedling, in regard to its period of leafing, and the tints of its foliage, so is the full-grown oak. Even extreme old age is not found to retard the expanding of the leaves, or to affect their colour. I consider a bed of seedling oaks, exhibiting, as it does, such diversity of colour and of form in the foliage, a most interesting object for contemplation; and I have sometimes fancied that even more of the future characters of the mature tree, such as its propensity to run tall or short in the stem, spreading in the limbs, and the general style and figure of the head and branches, might almost be predicted at this early period: but this, perhaps, is mere idle speculation.

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* See Whately's *Observations on Modern Gardening*, sect. xiii., for general rules as to the massing and disposition of the different tints of foliage.

I may add, that the same discrepance in the period of assuming and shedding the leaf is observable in other trees besides the oak, especially in the horsechestnut, the beech, and the ash.

Allesley Rectory, Feb. 21. 1834. W. T. Bree.

Art. V. *On producing Picturesque Effect in Plantations, as well as Shelter and Profit.* By Mr. T. Rutger.

Perhaps there is no country in the world that can compete with our own, in offering to the eye of the traveller such a diversity of scenery, in connection with the comforts of civilisation. We may not be able to boast of so much highly picturesque and truly sublime scenery as some of our Continental neighbours; yet the almost constant variety of hill and dale, and wood and water; extensive parks, with the mansions of noblemen attached; numerous villas, adorned with lawns and shrubberies; together with the neat cottages, verdant meadows, and fields skirted with stately trees, &c., which appear in quick succession to the view throughout our cultivated districts, cannot but be felt and admired by all who have a taste for refinement; and I think that, in scenery of this description, our own country vies with any other in the world. But, while nature has been thus profuse in her gifts to some districts, by affording facilities for embellishment, she has been less so in others. Hence we have also our widely extended and barren heaths, with plains, so called, of vast extent, furnishing scarcely a shrub, or tree, to attract the notice of the inquisitive traveller, or to afford shelter or shade to man or beast. These, half a century ago, when travelling could not be so expeditiously effected as at the present, must have acted, for many hours in succession, as a dead weight on the minds of such as were the admirers of beautiful scenery. In some districts, however, something has been done towards removing this unvaried and dreary aspect by planting; which, if prosecuted with the spirit that it deserves, will, in a few years, add much beauty to those parts of our country which are at present so dreary and uninteresting. From the extension of the practice of planting, pecuniary advantages will also be derived, by affording, not only shelter to the flocks and herds feeding on the plains, but, also, by giving to the proprietors of such districts a prospect of being ultimately remunerated with a good percentage for property expended in the planting. In the mean time, it may be observed, that utility ought not to be taken solely into the account, by those who feel inclined, and have the means in their power, to enrich the more dreary parts of our country with "living green." Sound judgment and good taste should also be exercised, to combine embellishment with utility, and then, in all such projected improvements, much of beauty would be the result, as well as much of advantage.

In travelling, a few weeks ago, through a part of Suffolk, namely, between Newmarket and Thetford, I was particularly struck with the singular appearance of a number of straight unconnected belts of trees, of nearly equal width, planted in various directions on the open lands in that district, some of which were of great length; the object of these, I found, was to afford shelter to the stock grazing there. The principle, as such, I admitted at once to be good; I could not help, however, condemning the mode of carrying it into effect. Had these belts been disposed of advantageously, in curves of unequal width, and clumps been here and there introduced with judgment, much of the picturesque might have been accomplished, with an equal degree of utility; and, instead of presenting such a stiff uniformity, with scarcely any apparent design, parklike appearances might have been gained, which, to the eye of the tourist, would have been interesting, particularly as a large portion of the road is straight, being, in some instances, from two to four miles in length, without the least turn; a prospect which must be at all times tedious to the traveller, and especially so when passing over an open country.

If these remarks should be permitted to meet the public eye through the medium of your Magazine, and be deemed worthy of consideration by any of your readers, the end I have in view will be answered; namely, that of suggesting that wherever planting is carried on with a view to utility, it ought also to be accompanied with taste. Thus giving as much beauty to the scenery as there may be a capability of producing, according to local advantages or disadvantages, of whatever nature they may be. To accomplish this, a person of accredited judgment might be employed with advantage. T. RUTGER.

Shortgrove, Essex, Nov. 1833.

ART. VI. *A Sketch of a Flower-Garden, with Remarks.*

By MR. T. RUTGER.

SHOULD you conceive the accompanying sketch (*fig.* 14.) for a flower-garden worth a place in your Magazine, it is at your service. A section, viz. one half of it, was laid down, some years since, at Woolmers, Herts, in front of a green-house which was standing on a lawn. The design was by Mr. Lewis Kennedy, and it was at that time much admired.

Strictly geometrical flower-gardens, on a small scale, may, perhaps, but in few instances, be deemed desirable by gardeners; as they are generally composed of narrow gravel walks, box edgings, portions of grass dotted with shrubs, &c., in connection with the clumps, which occasion a vast deal of labour to keep them neat and clean. This, however, is essentially necessary to render them attractive, and to afford pleasure to their owners. Notwithstanding these objections, geometrical gardens are frequently desired, particularly by ladies, whose recreations partly consist in viewing and admiring the beauties of Flora.

The selection of a proper site for a garden of this description should be the first thing attended to: a short and convenient distance from the mansion is desirable; and if on a level all the better. If within the precincts of the kitchen-garden, and walled round, of course a fence is unnecessary; but, if placed in the shrubbery, a wire, or some other fence, will be requisite to keep out rabbits and other vermin. I prefer the shrubbery, or pleasure-ground, as being, in my opinion, more appropriate, than to have the flower-garden attached to the kitchen-garden. From the principal walk, as near the house as convenient, a branch walk

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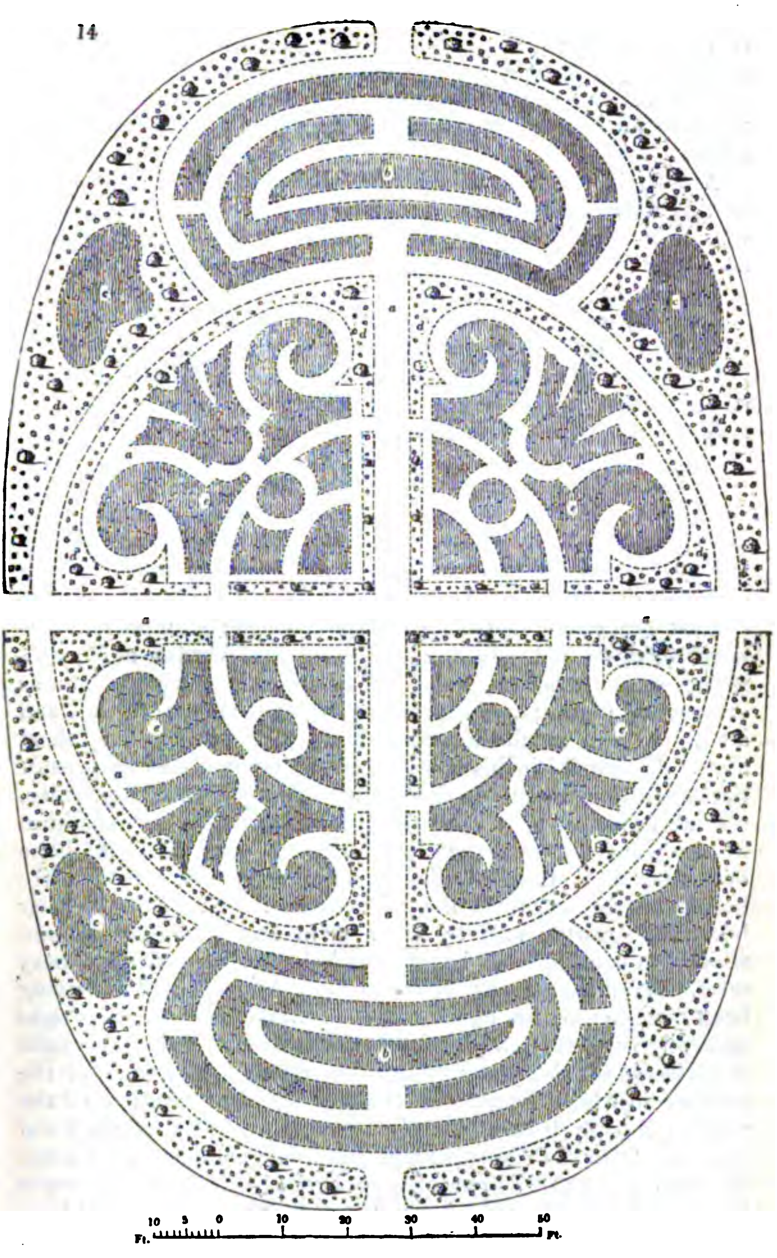


a, Gravel walks, with box edgings where no grass. *b*, Rosaries, or for georginas, or for roses and georginas alternately. *c*, Clumps for small American plants. *d*, Grass, dotted with shrubs; or pots with green-house plants, sunk in the ground. *e*, Flower-beds.

should be made to lead off to a sufficient distance, so as to admit of shrubs being planted round, to hide it from the view; and, after passing through, it may lead into the principal walk again. An arbour, or small reading-room, is almost indispensable, particularly when the garden is at a considerable distance from the house.

A lawn in the front of a house should never be appropriated to this species of garden, as it will admit of nothing desirable, when compared with what it will destroy; besides, seclusion is necessary to render a flower-garden a desirable retreat.

On the supposition that the accompanying sketch were to be laid down, an arbour or recess might be placed at either or both ends; and if the situation were convenient for water, with a little alteration, a fountain, or vase, with a small pond for gold and silver fish, might be placed in the centre.

Shortgrove, Essex, Feb. 1834. T. Rutger.

Art. VII. *On planting Cape Ericas in the free Soil, and sheltering them with a sashed Frame.* By Mr. Robertson, Nurseryman, of Kilkenny.

Few see ericas in their native perfection: stunted and impoverished, a great proportion of those preserved in our greenhouses must be rather considered as botanical specimens than as ornamental plants; and it requires no small amount of skill and attention (both which they unremittingly demand) to keep them alive. To diminish this labour, and to enjoy ericas in greater perfection than is usually done, I constructed, some time since, a small frame for their reception; and prepared a border within it, into which I turned the plants early last summer, in the hope of seeing them there display beauties to which I had before been a stranger. This hope has been fully realised by their luxuriant growth; and by their vivid and abundant bloom, which has continued in beauty much longer than the ordinary term. Never having seen or read of any thing of the kind having been done before (though the idea is simple, and such as might naturally suggest itself [see I. 374., IX. 584.]), I have thought it advisable to give you a description of my frame, and of the manner in which I prepared the soil for the reception of the plants; though, it being merely an experimental attempt, I did not carry it to the extent which, I am now convinced, it merits. The frame is a three-light one, each sash 3 ft. 6 in.; in front it is 9 in. deep; and, at the back, 4 ft. 6 in., though it should here have been 6 ft. high, as the heaths have already outgrown it. The border has, at bottom, 6 in. of loose stones, covered with 6 in. of fine sifted rotten loam mixed with sand, good peat being scarce here. Over this is a stratum of sandy peat, 16 in. or 18 in. deep. The sorts planted were, *Erica* ignéscens, cruénta, coccínea, Bowie*àna*, hýbrida, cáffra, vestìta, cerinthöìdes, Petiver*iàna*, mammòsa, Paterson*iàna*, cylíndrica, Ewer*iàna*, villòsa, longiflòra, longifòlia, Blèt*ia* [? béllа], verticillàta, ventricòsa, and some others. During summer, the plants require frequent watering, all possible air on temperate days, and shading on scorching sunny ones. The shading may be effected by a mat; and the ventilation by tilting up the glass at the ends, so as to produce a thorough current of air. In winter, the same attention to air is necessary, but no water should be given: the plants should be screened from rains; and, of course, covered up, should severe frosts occur. In Ireland, however, we rarely have frosts to a degree which requires more protection than the glass will afford (p. 62.); and I am persuaded that a number of the Cape ericas are sufficiently hardy to stand our winters in the open air. Some have with me, and I have planted out others on trial; but this they cannot be said to have had, since, for these three years back, we have had no frost that would destroy a pelargonium. I have little doubt of ericas succeeding on the sea-coast, which is of a still milder temperament. The situation that the frame was unavoidably placed in has not had an hour's sun during the winter, yet not one plant has damped off.

Kilkenny, Jan. 6. 1834. J. Robertson.

Art. VIII. *On growing Ferns and other Plants in Glass Cases, in the midst of the Smoke of London; and on transplanting Plants from one Country to another, by similar Means.* By N. B. Ward, Esq. F.L.S.

I was accidentally led, about four or five years ago, to make some experiments on the growth of ferns, &c., in closely glazed vessels, from the following circumstance. I had buried the chrysalis of a sphinx in some moist mould in a large bottle covered with a lid. The insect attained its perfect form in about a month, when I observed one or two minute specks of vegetation upon the surface of the mould. Curious to observe the developement of plants in so confined a situation, I placed the bottle outside one of my windows with a northern aspect. The plants proved to be one of *Pòa* ánnua, and one of Nephròdium [Aspídium *Swz.*] *F*ìlix-más. In this situation they lived for more than three years, during which time no fresh water was given to them, nor was the lid removed. The fern produced four or five new fronds every year; and the *Pòa* flowered the second year, but did not ripen its seeds. Both plants ultimately perished, from the admission of rain water, in consequence of the rusting of the lid. I have repeated this experiment, with uniform success, upon more than sixty species of ferns belonging to the following genera: — *A*splènium, Aspídium, *A*diántum, *B*léchnum, Cheilánthes, Davállia, Dicksònia, Doódia, Grammìtis, Hymenophýllum, Lycopòdium, Nephròdium, Niphóbolus, *P*olypòdium, *P*tèris, and *T*richómanes. Various other plants, vascular as well as cellular, and more particularly those which delight in humid situations, succeed as well as the ferns. Among others may be enumerated: — *O*'xalis Acetosélla, *A*nemòne nemoròsa, Dentària bulbífera, Pàris quadrifòlia, *Verónica* montàna, Lístera (Neóttia) Nìdus àvis, &c. The method of proceeding is very simple. The ferns, &c., may be planted in boxes of any size or shape, furnished with glazed sides and a glazed lid. The bottom of the box should be filled with nearly equal portions of bog moss, vegetable mould, and sand; and the ferns, after planting, should be most copiously watered, and the superfluous water allowed to drain off through a plughole in the bottom of the box: the plug is then to be put in tight, the glazed lid applied, and no farther care is requisite than that of keeping the box in the light. In this way many plants will grow for years, without requiring any fresh supply of water. It is scarcely necessary to point out the advantages which this plan (subject to some modifications, according to the nature of the enclosed plants) offers to the horticulturist, and to the physiological botanist. To the one, it furnishes a ready mode of importing most plants, without risk, from the most distant regions of the globe; and, to the other, the opportunity of making more accurate experiments than have hitherto been practicable, on many important points connected with vegetable economy; such as on the germination of seeds, and the developement of plants in various kinds of air and soil, &c.: but upon this part of my subject I need not here enlarge. The numerous experiments I have already made have, I think, established one important fact, that the air of London, when freed from adventitious matter, is as fitted to support vegetable life as the air of the country. I cannot conclude this short account without expressing my warmest acknowledgments to the Messrs. Loddiges, who have at all times furnished me with every plant I required from their invaluable collection.

Wellclose Square, London, N. B. WARD.
March 6. 1834.

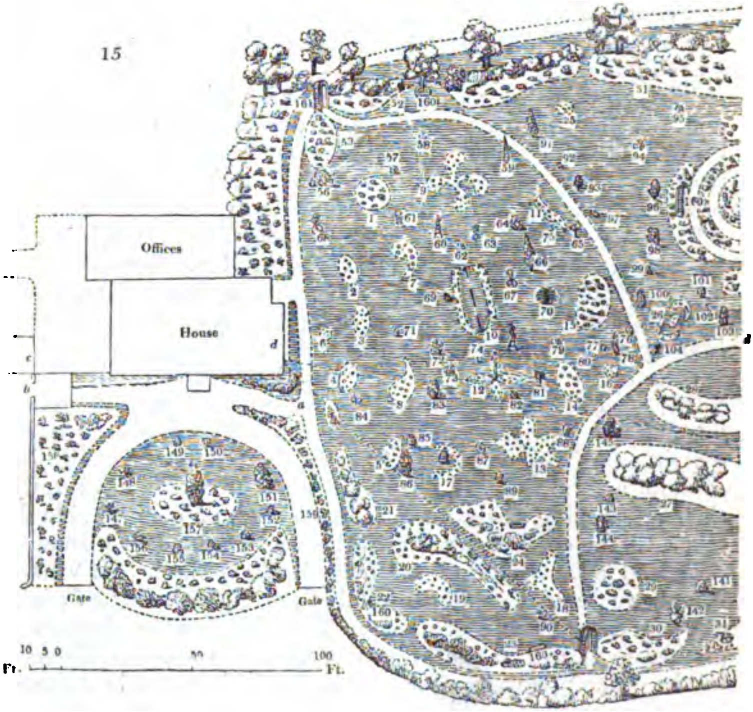
WE have before (p. 163.) suggested that miniature conservatories might be constructed and managed in rooms, in the same manner as Mr. Wood constructs and manages his glazed cases for ferns. A little farther consideration will convince any one, that even large green-houses and conservatories might be constructed in the smoky air of London, on the same principle; and kept free from the grosser impurities of the atmosphere, by causing all the air which should enter them to filter through fine cloth. The purity of the air in living-rooms might also be increased by filtration. — *Cond.*

Art. IX. *Descriptive Notice of the Gardens of the Misses Garnier, at Wickham, near Fareham, in Hampshire;* by the Conductor: *with a Monthly Calendar of the Work done, and of the principal Flowers produced;* by Mr. James Moore, Gardener to the Misses Garnier.

In the course of our tour, in the autumn of 1833, we called at the villa of the Misses Garnier, near Wickham, which has long been celebrated for its flower-garden; and, much as we had heard of it, from Mr. Page of Southampton, Mr. Young of Epsom, and other nurserymen and gardeners, it very far surpassed our expectations.

The grounds are flat, with no exterior advantages whatever, and therefore the merits of these gardens are entirely dependent on art. The walks and beds are laid out according to the ground plan (*fig.* 15.); the beds are most judiciously planted; and the order and keeping of the whole are of the very highest and most refined description. In this respect, the garden at Wickham belongs to the same class as the gardens of the Rev. Thomas Garnier, at Bishopstoke; of Mrs. Corrie, near Birmingham; Mrs. Robert Phillips, near Cheadle; Lady Boughton, near Chester; Mrs. Starkey, at Bowness; and a few others. The first view of the garden of the Misses Garnier, when the door marked *a* in the plan (*fig.* 15.) was opened, which looks into it from the garden forming the entrance court, struck us with astonishment and delight; the bold masses of brilliant-coloured flowers in the foreground, and, afterwards, the succession of masses of flowers, with their intervening glades of turf, extending to a considerable distance, till the colours were almost lost in the boundary plantation, produced a landscape of the most brilliant kind. In walking round, we found the walks brimful of gravel, with the turf edging nowhere deeper than half an inch. The beds, in some places, were planted in masses of one or two species or varieties; in others, by the different species of one genus; and, in some, by a miscellaneous assemblage. The plants were in all cases, except those of creepers and the kinds planted in masses, placed at such distances from each other, as not to touch when in full growth and bloom, in consequence of which every individual plant was covered with flowers from the base to the summit; but the creepers were sufficiently close together to cover the whole of the beds with their foliage. Pelargoniums, China asters, stocks, and other plants intended to display masses of flower of one colour, were also planted so as to cover the entire bed.

The woody plants consist of roses, climbers, and twiners, with rhododendrons, azaleas, and other American and peat-earth shrubs, and of the larger exotic shrubs and flowering trees. The roses are displayed in a rosary, in masses on the lawn, or singly as standards; the climbers cover trellised arches, or supports of trelliswork (*fig.* 16.), or of three or four iron rods, as shown in *fig.* 17.; the twiners run up poles; the low American shrubs are partly disposed in masses, and partly as single plants; and the larger shrubs and ornamental trees are distributed along the margin of the garden, and also scattered throughout, as will appear by the details of the ground plan. From the drawing-room window at *d*, there is a vista to the trellised arch *e*, and



1. to 5. Herbaceous plants. 6. Perpetual roses. 7. and 8. Roses edged with pansies. 9. German stocks edged with pansies.

10. Trellis enclosed by herbaceous borders. 11. Delphiniums and digitalises. 12. Calceolarias and potentillas edged with *Vìola* cornùta. 13. and 14. Herbaceous plants. 15. Hollyhocks edged by various China roses. 16. Crotalària élegans. 17. American plants, with *Cý*tisus elongàtus in the centre. 18. Lobelia in sorts. 19. Collection of best pinks.

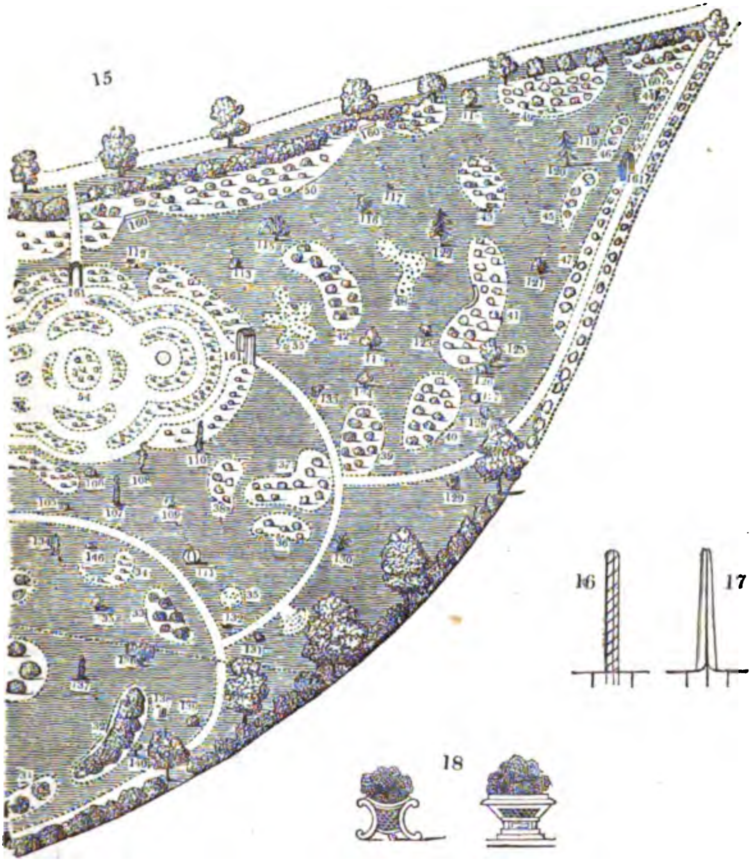
20. American and large-growing shrubs, with tree roses forming vista to arch. 21. and 22. Hollies twined with honeysuckles and roses, and blended with flowering shrubs. 23. and 24. American and large-growing shrubs. 25. Pelargoniums. 26. Roses in the centre, with herbaceous plants in the two borders. 27. and 28. Large shrubs, hollies, &c. 29. American plants edged with *Ger*ànium sanguíneum.

30. to 33. Forest trees, evergreens, and shrubs. 34. *V*erbèna *c*hamædrifòlia, a bed of. 35. *S*álvia spléndens. 36. to 47. Forest trees, evergreens, and flowering shrubs. 48. Hollyhocks. 49. to 53. American shrubs, backed by hollies and honeysuckles, with trees behind, and broken to supply a view of the contiguous ground. 54. Rosary, comprehending a fine collection of roses, enclosed by evergreens, flowering shrubs, &c. 55. Collection of phloxes. 56. Scarlet arbutus. 57. Leonòtis Leonùrus. 58. Tree rose. 59. Pedestal of *C*aprifòlium flexuòsum.

60. *R*òsa bracteàta, and caprifolium in sorts. 61. *D*áphne Dauphínii (*D.* hýbrida), and Gaulthèr*ia* procúmbens. 62. Andrómed*a* arbòrea. 63. Fúchs*ia* cònica, edged with Lobèl*ia* tríquetra. 64. Magnòl*ia* conspícua. 65. *Sophòra* japònica var. péndula. 66. *C*uprèssus sempervìrens. 67. *L*upìnus mutábilis var. Cruckshank*siànus*. 68. Caprifòlium, sorts of, over cross-shaped basket. 69. *P*olýgala latifòlia.

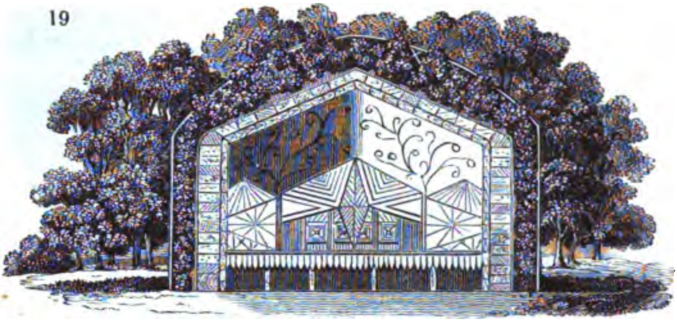
70. *Yúcca* gloriòsa. 71. Halimodéndron argénteum. 72. Hydrángea horténsia. 73. *Petùnia* phœnícea. 74. Basket of *V*erbèna *c*hamædrifolia. 75. Tripod basket of pelargoniums. 76. Corræ̀*a* speciòsa. 77. *Yúcca* aloëfòlia. 78. Magnòl*ia* Soulange*àna*. 79. *R*hododéndron

another to an old oak tree at *f.* The kitchen-garden is entered by the door marked *b* in the plan (*fig.* 15.); and there is a green-house



catawbiénse. 80. Basket of plants in pots. 81. *Cy*tisus purpùreus, standard. 82. Kálm*ia* latifòlia. 83. *Pa*liùrus aculeàtus. 84. Tree rose. 85. Photínia serrulàta. 86. Schubért*ia* dísticha. 87. Brugmáns*ia* suavèolens. 88. *Bérberis A*quifòlium. 89. Kölreutèr*ia* paniculàta. 90. *Cy*tisus elongàtus. 91. Upright cypress. 92. *Técoma* capénsis pyramidàlis. 93. Tree rose. 94. *Amelánchier* Botryàpium. 95. Fúchs*ia* arbòrea. 96. Magnòl*ia* tripétala. 97. Basket of pelargoniums. 98. *L*igústrum lùcidum. 99. *M*imulus glutinòsus.
100. *Juníperus* virginiàna. 101. *Cratæ`gus Azaròlus.* 102. *Pæònia Moútan* papaveràcea. 103. Obelisk clothed with *A*pios tuberòsa. 104. Tropæ`olum tricolòrum. 105. *R*hododéndron álta-clerénse. 106. Kálm*ia* latifòlia. 107. Períploca græ`ca. 108. *R*hododéndron arbòreum. 109. *Pæònia Moútan.* 110. *C*upréssus sempervìrens horizontàlis. 111. Cross basket of *C*aprifòlium gràtum. 112. *R*hododéndron Smíth*ii.* 113. Chionánthus virgínica. 114. Xanthóxylum clàva Hércul*is.* 115. Weeping ash. 116. Broussonèt*ia* papyrífera. 117. *C*érasus nìgra. 118. Large holly. 119. *V*ibúrnum stríctum.
120. Hemlock spruce (*P*ìnus canadénsis). 121. Holly. 122. *C*èdrus Libàni. 123. *R*hododéndron atropurpùreum. 124. Gymnócladus canadénsis. 125. *A*'cer Pseùdo-*P*látanus. 126. Holly. 127. *P*ìnus *Cémbra.* 128. *A*'rbutus procèra. 129. *V*ibúrnum lùcidum.
130. *P*hórmium tènax. 131. Camellia, sorts of. 132. Fúchs*ia* grandiflòra. 133. Basket of Russian stocks. 134. *R*òsa Boursaúlt*ii,* pedestal. 135. Aràlia spinòsa. 136. *T*ília europæ`a. 137. *A*tragène austrìaca, pedestal. 138. *A*'bies excélsa. 139. *R*hododéndron pónticum.
140. Piptánthus nepalénsis. 141. Hydrángea horténsis. 142. Tree rose. 143. *R*hododéndron máximum. 144. *I*'lex *m*yrtifòlia. 145. *Pæònia Moútan.* 146. *Sophòra* japónica péndula. 147. Eriobótrya japónica. 148. Tree rose. 149. Magnòl*ia* glaúca.
150. *Caragàna* frutéscens. 151. Magnòl*ia* grandiflòra. 152. Tree rose. 153. Maclùr*a* aurantìaca. 154. Tree rose. 155. *Catálpa syringæ*fòlia. 156. Noisette rose. 157. *La*ùrus nóbilis, with georginas. 158. Six tree roses, with herbaceous plants; evergreens near the house. 159. Hollies, honeysuckles, China roses, herbaceous plants in front. 160. Seats. 161. Trellised arches.

19

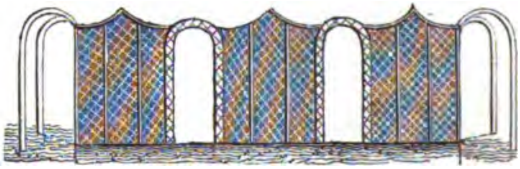


c, besides pits, frames, &c.; and a reserve garden at *g*, for keeping up a stock of herbaceous plants, roses, &c., for the lawn or flower-garden. The trees on the walls of the kitchen-garden are trained with the greatest neatness, and completely cover the wall from the ground to the coping; the wall borders were, when we saw them, very slightly cropped, and in some places not cropped at all. Every part was in the best order; and, indeed, there was an appearance of freshness, health, and vigour, in all the gardens and scenery, which, joined to the fineness of the day, completed the effect of their gaiety and beauty.

There are a few buildings, or artificial ornaments, in these grounds, of a simple rustic description, such as the seat formed of moss and hazel rods (*fig.* 19.); trellised arches for climbers (*figs.* 20. and 21.); rustic vases (*fig.* 18.); and iron rods for roses and other slender-growing shrubs. (*figs.* 16. and 17.)

20

21



MONTHLY CALENDAR OF THE FLOWER-GARDEN.

January, 1833.—During this month there is but little doing in the flower-garden. The gravel walks are kept clear of weeds, and neatly rolled, and the turf is swept once a week, or oftener, as it may require. Honeysuckles, clematises, and other deciduous climbing plants, are now pruned and tied. If the weather is mild and dry, the coverings are removed from the half-hardy and green-house plants which have been kept out during the winter, to prevent them from damping off; it is necessary, however, to replace the coverings carefully before the sun is off the plants. Slugs must be destroyed when the weather is mild, by hand-picking or lime water; the latter method I find the most effectual, being careful to let it *settle well* before using it, otherwise it leaves a whiteness on the leaves of the plants.

The productions of the flower-garden at this season are not numerous; its beauty depending chiefly on the green turf and evergreens, among which the laurustinus is one of the most conspicuous, being now in full flower. *C*ydònia japónica, common China roses, and the winter aconites, are also now in bloom; and in mild seasons Neapolitan violets, *A*nemòne coronària, *A.* horténsis flòre plèno, Aubriè*tia* *h*esperidiflòra, *D*áphne collìna, and neapolitàna, Alètris aúrea, white queen stocks, and a few varieties of heartsease.

February. — We now begin to be more busy in the flower-garden. The roses are pruned, except the evergreen varieties; and the borders are well dressed with strong stable manure, which is dug in a spade deep. Young plants are put in to fill up any vacancy. Old plants that are become very luxuriant are taken up, with as much earth as will adhere to their roots, and replanted. This checks their growth, and causes them to produce less wood and finer flowers. A good heap of compost is now prepared, in which the more delicate kinds of half-hardy and green-house plants are to be planted in May and June. Ranunculus roots are now planted. The turf and gravel walks and the destroying of slugs, require to be attended to as in the last month.

We have but few flowers to boast of during this month, and what we have are chiefly *C*ydònia japónica, laurustinus, daphnes, and a few common China and Noisette roses. These roses flower nearly all the year in Miss Garnier's garden, and, contrasted with the dark green foliage of the common hollies, against which they are planted, have a beautiful effect; flowering among the branches to the height of twenty feet; and I think it is owing to their being protected by these hollies that they afford flowers during the winter months.

March. — About the beginning of this month, I proceed to pot the georginas, and place them in a cold frame or pit. German stocks and asters, and other tender annuals, are now sown on a slight hotbed. Lobè*lia* speciòsa and L. fúlgens are potted and placed on a frame in a gentle heat. The seed of georginas must be sown in large pans, and likewise placed on a gentle heat. The seeds of Nico*tiàna* fràgrans, Lobè*lia* bícolor and grácilis, and other green-house plants intended for the open borders, are also sown during this month. The edgings of the gravel walks are now cut with the edging-iron: I mention the edging-iron more particularly, as this is the only time in the year that I cut the edges with it, as I always cut them after, throughout, with shears. The gravel is turned over, and fresh gravel added, filling the walks so full as not to allow the edges to be more than half an inch in depth. The turf is now repaired where it has been destroyed by the drip of trees or any other cause; and pots of hyacinths and tulips are plunged into the borders, to produce flowers in April and May. The flower-garden is now beginning to be more gay. The daphnes and cydonia still continue in bloom. Polyanthuses, hepaticas, single and double crocuses, periwinkle, *C*ýclamen còum, *S*axífraga oppositifòlia, *R*hododéndron däùricum var., and *R.* däùricum var. atrovìrens, are now in bloom.

April. — At the beginning of this month the turf is swept, rolled, and mowed; the flower borders are edged, carefully stirred up, and broken as fine as can be with the garden prong: I defer using the rake until next month. Seeds of hardy annuals are now sown in the open borders. The coverings of moss, coal ashes, &c., are partially removed from the half-hardy and green-house plants. *C*aprifòlium flexuòsum, *J*asmìnum revolùtum, and all the varieties of evergreen roses, are now pruned and trained. Seedling georginas, which were sown last month, are now pricked out on a slight hotbed, covered at night with mats. Cuttings of *V*erbèna *c*hamædrifòlia, pulchélla, Lambérti, &c., *S*álvia spléndens, coccínea, involucràta, angustifòlia, cardinàlis, and Grahàm*i*, are now planted on a slight hotbed under hand-glasses, to produce plants for turning into the open borders in June. Heartseases are propagated by cuttings during this month; seeds of hollyhocks are sown, and tuberoses potted for late flowering in the open borders. The box edgings are also cut down during this month.

The following shrubs and herbaceous plants, which are in bloom, are, Magnòl*ia* conspícua, *Rìbes* sanguíneum, Andrómed*a* dealbàta, *O'*robus vérnus, Erythrònium déns cànis, *I'*ris vérna and pérsica; *P*hlóx subulàta, carolìna, divaricàta, setàcea, nivàlis, and vérna; *Verónica* vérna, *G*enti*àna* vérna, Soldanélla alpìna, *Lý*chnis alpìna, Sanguinària canadénsis, *P*olemònium réptans, Claytòn*ia* virgínica, fritillarias, tulips, and hyacinths, narcissuses, double polyanthus, double wallflowers, &c.

May. — During this month the flower-garden takes up my whole time and attention; which you are no doubt well aware that such a garden as this must do, if proper attention be paid to it. I am, however, a real lover of plants myself, and I am proud to say I am supported and encouraged by my employers in every respect, which makes the arduous task I have to perform a source of delight. I now take away the remaining part of the coverings from the half-hardy and green-house plants, adding fresh soil to such as are standing on turf. The borders are now raked down, but not broken very fine, as the borders not only look better for not being raked so very smooth, but the plants thrive better, and the soil keeps more open and healthy. I now sow on a warm border, or slight hotbed, a succession of annual flowers, such as German asters, German stocks, clarkias, œnotheras, &c. Those sown in March are now planted out, and the cuttings of salvias, verbenas, &c., being now sufficiently rooted, are potted off, to strengthen them for final transplanting next month. Sweet peas are now sown for late flowering. The roses are carefully examined twice or thrice during this month, to destroy a little brown grub [that of one of the *T*enthredínidæ *], which infests them at this season; the most effectual method of destroying which is by picking them off. The borders of heartsease, &c., are now watered, late in the evening, with clear lime water, which I have found to be an excellent method of preserving the flowers from the depredations of slugs and other insects. Lobèl*ia* speciòsa and fúlgens are planted together in a bed. The flower stems of phloxes and many other strong-growing herbaceous plants, are thinned out, cutting away about a third part, as I have noticed that the plants which have been thinned always produce the finest flowers. The turf is now mown once a week, and the gravel is attended to as in the preceding months. Of all the flowers which adorn the garden during this month, those of the *Pæònia Moútan* and *Moútan papaveràcea* are the most showy; but there is also now in bloom Magnòl*ia* Soulange*àna*, and M. acuminàta. Azàlea índica álba and purpùrea (which in this garden have survived the winter for the last four years, only protected by a slight covering of furze) are now beginning to expand their beautiful bloom; also *L*èdum latifòlium, Kálm*ia* glaúca, *Caragàna* frutéscens, Robín*ia* híspida, Halès*ia* tetráptera, *V*accínium stamíneum, Mahòn*ia* fasciculàris and *A*quifòlium, and *Rìbes* missouriénse. Of the herbaceous plants that flower during this month, the following are the most showy: — *I'*ris pùmila, *Verónica* gentianöìdes and rèpens, *G*enti*àna* acaúlis and alpìna, Erpètion renifórmis, Campánula punctàta, Erythræ'a aggregàta, Tríllium grandiflòrum, *Œ*nothèra pùmila, Saponária ocymöìdes, *O'*xalis flàva and floribúnda, Potentílla rupéstris; Aquilègia sibírica, grandiflòra, and canadénsis; Pentstèmon campanulàtus, Eròdium romànum, *T*rifòlium uniflòrum, Calceolària rugòsa, *A*sphódelus álbus, Adysèton saxátile, *Œ*nothèra Lindley*àna* and bìfrons, Clárk*ia* pulchélla, Schizánthus pinnàtus (the annuals having been sown in September, and kept in a frame during winter), and heartsease in almost endless variety.

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* It is only the enthusiastic gardener who can fully feel the evil of this insect's ravages. To have manured, dug, planted, pruned, and taken suckers away from one's rose bushes in beds, and, as they sprout in spring, to be painting in imagination the rich, the brilliant display of their variedly beautiful blossoms in July; and, in the midst of this anticipation, to be compelled to perceive that hidden enemies are working a frustration of your exulting hopes, is annoying, vexing, saddening, chagrining, mortifying, &c. The enemies are the caterpillars (grubs, maggots, or larvæ) of, I believe, one of the sawfly tribe (*T*enthredínidæ), which, when full grown, just previously to their changing into the pupa state, are about half an inch long, about as thick as a crow's quill, usually brown in the body, sometimes rather glaucous, with the head black. Before, however, any one of them has attained this state, it has done a world of mischief; has eaten into, through, and out of, possibly, and not very improbably, half a dozen "roses in the bud." The caterpillars are quite minute at first, and begin to eat and do mischief before the sprouting shoot, in which the embryo rosebuds are, has attained more than half its length. While the shoot is lengthening, the caterpillar is feeding unremittingly (except during the changings of its skin); and, by the time that the shoot has become developed, and the rosebuds it bears obvious, one, two, several perhaps, sometimes all, of the buds in a cluster, are found incapacitated from blooming by the ravages effected within them, and sometimes down their peduncles, by the caterpillars mentioned. To what species of insect does it belong? Does it proceed from eggs deposited by the parent fly upon the branches of the rose bush in the autumn preceding? I have met with the caterpillars of the rose-eating insect by the middle of April. I once found a minute caterpillar, not very dissimilar, inside the bursting bud of a species of willow; and another, still more like it, on the common honeysuckle. — *J. D.*

June. — The first object of my care, at the beginning of this month, is the rosary, which I carefully examine, in order to destroy any grubs that may yet remain; and also the green fly (A'phis) which infests the roses at this season, which is easily killed with tobacco water. I put half a pound of the best shag tobacco to a gallon of hot water, and as soon as the infusion has become cold, I dip all the buds and infested parts of the young shoots into it, letting them remain a few seconds in the water. If they are very much infested, I go over them a second time. After this I wash them with clean water; and I am amply rewarded for my trouble with clean, beautiful, well-blown flowers. I now plant out georginas, mostly on borders by themselves, from 4 ft. to 5 ft. apart each way. By planting them at this distance asunder, and growing them with single stems, they produce larger flowers, and do not attain more than two thirds of the height they usually reach when planted only two or three feet asunder. I now plant out in a bed by themselves all the varieties of calceolarias, which have been forwarded for this purpose in a frame. Nothing can exceed the beauty of a bed of this beautiful tribe of plants. The following green-house shrubs are now planted in the turf: — *A*càcia lophántha and dealbàta; Fúchs*ia* cónica, grácilis, arbòrea, and *l*yciöìdes; *M*ímulus glutinòsus, Corræ'*a* speciòsa, Lavátera tríloba, *O*thónna [?] septémfida, *L*upìnus mutábilis var. Cruckshank*iànus*, Boròn*ia* denticulàta, Leonòtis Leonùrus, Hùme*a* élegans, and *P*olýgala latifòlia. I also place on the turf baskets of pelargoniums, ixias, and sparaxises, German stocks, Schizánthus Hoókeri, and *V*erbèna *c*hamædrifòlia. In the borders are planted all the dwarf sorts of fuchsias and cinerarias, pelargoniums, teucriums, cistuses, E'pacris grandiflòra, *D*ólichos lignòsus, escallionias, arctotises, Sutherlánd*ia* frutéscens, *G*enísta canariénsis, heliotropiums, &c. Young cuttings of sweet-scented and other China roses are planted in a shady border under hand-glasses. I prefer this month to any other for striking roses, as the cuttings soon form roots, and most of them will flower in autumn. Tuberoses are now planted in the rosary; and these, with the perpetual-flowering roses, keep up a continual bloom in this part of the garden till October. The productions of the flower-garden during this month are numerous and beautiful. The azaleas, kalmias, rhododendrons, and some species of Andrómed*a*, are now in full bloom. The fragrance of the azaleas, together with that of a bed of pinks of about thirty varieties, German stocks, honeysuckles, &c., quite perfumes the garden. In this month we have also in bloom the beautiful Wistàr*ia* Consequ*àna*, Hòve*a* Célsi, Sutherlánd*ia* frutéscens, Arctòtis aurèola, *P*hlóx ovàta, amœ'na, and réptans; Arthropòdium paniculàtum, Arnopògon Dalechámpii, Coronílla montàna, *L*upìnus polyphýllus and polyphýllus álbus; *O'*robus *l*athyröìdes, Cinerària cruénta and álba, *A'*ster alpìnus, *L*ýchnis fúlgens, Potentílla Hopwood*iàna* and formòsa, *P*apàver bracteàtum and orientàle, *C*ístus vaginàtus and críspus, Heliánthemum formòsum, *Pæònia* Reevèsii, albiflòra, albiflòra Hùme*i*, albiflòra fràgrans, &c.; *D*elphínium exaltàtum, *Tróllius* asiáticus and intermèdius, Pentstèmon Scoúler*i* and pubéscens, *V*erbèna pulchélla and Aublèt*ia*, *E*rìnus *l*ychnídeus, Lubín*ia* atropurpùrea, E′pacris grandiflòra, *Petùnia* nyctaginiflòra, gigantèa, and phœnícea; Nierembérg*ia* grácilis, Ramónd*a* pyrenàica, *D*odecàtheon Meád*ia*, Hàke*a* aciculàris, Watsòn*ia* fúlgida, *G*ladìolus byzantìnus, *S*álvia angustifòlia and cardinàlis, Alonsò*a* intermèdia, Corræ`*a* speciosa; *Œ*nothèra speciòsa, cheiranthifòlia, and acaúlis; Fúchs*ia* grácilis, cónica, globòsa, microphýlla, coccínea, *l*yciöìdes, and microphýlla grandiflòra; Thermópsis *f*abàcea; *I*`ris *x*iphiöìdes, versícolor, variegàta, cristàta, &c.; *Verónica* caucásica and latifòlia, Czáck*ia* Liliástrum, *S*cílla peruviàna, *A*′llium flàvum, *H*emerocállis flàva, Fúnk*ia* ovàta, Zephyránthes grandiflòra, *L*ìnum trígynum and flàvum, *Ríbes* speciòsum, Lobèl*ia* lùtea, *b*ellidifòlia, cærùlea, and bícolor; Campánula pùmila and púlla, Aquilègia glandulòsa, Magnòl*ia* cordàta and acuminàta.

July. — The flower borders are now cleared from weeds where any appear, and raked over; and the stems of all the plants that are past flowering are cut away. I find that many kinds of herbaceous plants, if cut down as soon as the first bloom is past, will shoot up a second time, and produce some good spikes of flowers in September. The rosary, which consists of nearly 200 varieties of roses, is now in high beauty. I look them over about twice a week, and cut away every flower that is overblown. The borders are also raked over, to give the whole a neat appearance. The baskets of ixias, sparaxises, and lapeyrousias being now past blooming, the pots which they were in are taken out, and the baskets refilled with German stocks, pelargoniums, &c., which continue in bloom until October. The annual flowers, sown in May for succession, are now planted out. Cuttings of fuchsias, calceolarias, linums, anagallises, pelargoniums, and many other half-hardy and green-house plants, are now planted in a shady border under hand-glasses. The turf and gravel walks, edges, &c., are attended to as in the preceding months. The large hollies in the shrubberies, which grow very luxuriantly here, now present a beautiful appearance, being covered with roses from the bottom to the very top. The sorts are, the common and pale blush China, Noisette, bengalénsis, scándens, Madame d'Arblay, burnet-leaved, Single Macartney, the Dundee rambler, Boursaúlt*ii*, and *R*òsa rùga. The standard roses, which are situated on the turf, also have roses of the perpetual-flowering kinds planted against their stems, which takes off that stiff appearance which the naked stem of a tree rose always presents. The shrubs and herbaceous plants which flower here during this month are very numerous. The following are the most rare and beautiful kinds: — Echinàcea heterophýlla; *G*enti*àna* crinìta, septémfida, lùtea, and cruciàta; *L*ílium cándidum, longiflòrum, japónicum, bulbíferum, spectábile, cóncolor, &c.; Vallòt*a* purpùrea, Habránthus robústus; Alstrœmèr*ia* Símsii, Hoóker*i*, *Pelegrìna*, and *Pelegrìna* álba; *A*sclèpia*s* carnòsa and púlchra, *P*hyteùma orbiculàre and hemisphæ′ricum, Lobèl*ia* pubéscens, cærùlea, coloràta, *s*enecioìdes, mucronàta, grácilis, &c.; Campánula speciòsa, carpáthica, nítida, pyramidàlis, aggregàta, azùrea, &c. &c.; Wahlenbérg*ia* grandiflòra, *P*olemònium cærùleum, cærùleum flòre álbo, and grácile; Prímula farinòsa, *A*nchùsa paniculàta and ochroleùca, Márica cærùlea, Cypélla Herbért*i*; *G*ladìolus Colvíll*ii*, natalénsis, and blándus; *S*álvia Gràham*i*, *c*hamædryöìdes, &c.; Commelìn*a* tuberòsa, Schizánthus retùsus, *R*héxia virgínica, *Œ*nothèra glaúca, Fràser*i*, and tríloba; Calandrín*ia* grandiflòra, Baptísia austràlis; Diánthus Físcher*i*, latifòlius, and hispánicus; Silène règia and compácta, *O*′xalis Déppe*i*, *L*ýchnis vespertìna flòre plèno and flós cùculi; Potentílla americàna, Russell*iàna*, &c.; *G*èum coccíneum, màjus, &c.; Drỳas octopétala; *D*elphínium élegans, sinénse, grandiflòrum, &c.; *A*conìtum variegàtum, Háller*i*, and álbidum; Dracocéphalum altaiénse, argunénse, and *r*òseum; Streptocárpus Réx*ii*; Pentstèmon pulchéllus, Míller*i*, ovàtus, *r*òseus, venústus, atropurpùreus, &c.; *V*erbèna *c*hamædrifòlia, Lambérti, venòsa, &c.; Maurándy*a* Barclay*àna*, semperflòrens, and a new seedling of a pale lilac purple colour; *M*ímulus ríngens, rivulàris, and variegàtus; *G*erànium lancastriénse, sibíricum, sanguíneum, and Wallich*iànum*; *L*upìnus perénnis, &c.; *S*enècio élegans, white and red double-flowered; Pascàl*ia* virgínica [? Heliánthus diffùsus], Centrocárpha chrysómela, Gazània rìgens, Cypripèdium spectábile; Calceolària bícolor, Atkins*iàna*, péndula, corymbòsa, Hope*àna*, epsoménsis, angustifòlia, integrifòlia, arachnöídea, *p*lantagínea, and many seedling varieties; Linària alpìna and trístis, Bouvárd*ia* triphýlla, with some varieties of phloxes, veronicas, sisyrinchums, saxifrages, annual œnotheras, clarkias, silenes, marigolds, &c. &c.

August. — The edgings of box are now neatly cut, and the flower-borders are weeded and cleaned, cutting away all the stems of herbaceous plants that are past flowering, and filling up every vacancy by plunging in pots of Lobèl*ia* fúlgens, Thunbérg*ia* alàta, mesembryanthemums, hybrid calceolarias, and others, Schizánthus retùsus, &c., which have been potted and grown for this purpose. Under this system of management, this garden is kept in full beauty throughout the summer. The pinks, being now past blooming, except four or five kinds that continue in flower till October, I plant out between them a quantity of German stocks, which were sown in June and potted for this purpose. These soon become strong plants, and flower beautifully, until destroyed by frost. The evergreens in the shrubberies are now pruned so that each plant may stand separate. Gathering seeds is also attended to every fine day. The flower-garden is now more beautiful than in any other month of the year. The georginas are in full bloom, consisting of more than a hundred varieties. The hollyhocks are also in full flower: some are planted in beds in the centre of the garden, others among the shrubs, which, towering up over the evergreens, are grand beyond description, some of them having attained the height of 17 ft. To grow them to this height, at the season for planting I dig a hole for each plant 2 ft. deep, and put in three or four shovelfuls of strong stable manure. There are now in flower in this garden forty-six double varieties of these beautiful flowers; thirty-four of which I have raised from seed myself within the last four years. The principal bloom of roses is now past; yet there is still a good show of the perpetual-flowering kinds, such as the yellow Noisette, odoràta, flavéscens, semperflòrens, Barclay*àna*, índica álba, purpùrea, Fraser*iàna*, and, that most valuable of roses, the crimson perpetual. The following shrubs and herbaceous plants are in flower: — *C*eanòthus azùreus; Lobèl*ia* fúlgens, speciòsa, cardinàlis, &c.; *A*sclèpia*s* tuberòsa and nívea, *E*rýngium marítimum, Kalosánthes coccínea and odoratíssima; Campánula frágilis, *p*ersicæfòlia flòre plèno and flòre álbo plèno, rhomböídea, *u*rticæfòlia, Trachèlium, lactiflòra, &c.; *G*enti*àna* *a*sclepià*dea*, Pneumonánthe, Saponària, &c.; *L*ílium canadénse, Ipomœ`a coccínea, Spigèl*ia* marilándica, *V*erbáscum phœníceum, *L*ysimàchia *E*phémerum and verticillàta, Nolàna grandiflòra, Grevílle*a* *r*osmarinifòlia, *G*ladìolus floribúndus flòre álbo; *S*álvia spléndens, involucràta, coccínea, fúlgens, bícolor, bracteàta, *c*hamædryöìdes, and *v*iolàcea; *Œ*nothèra missouriénsis, longiflòra, and *t*araxacifòlia; Epilòbium Hálle*ri* and angustifòlium, Eutáxia *m*yrtifòlia; Andrómed*a* pulverulénta, speciòsa, and *p*oliifòlia; Saponària calábrica, Diánthus arbúscula, *L*ýchnis coronàta, *L*ýthrum diffùsum, Mesembryánthemum spectábile, &c. &c.; Macròtys racemòsa, Argemòne grandiflòra, &c.; *C*ístus *s*alviæfòlius, créticus, &c.; Heliánthemum formòsum, *C*lématis flórida and flòre plèno, *P*hlòmis tuberòsa, Physostègia speciòsa, *Técoma* capénsis; Salpiglóssis, many varieties; Pentstèmon speciòsus, Richardsòn*i*, Digitàlis, &c.; Chelòne glàbra, Thunbérg*ia* alàta; Digitàlis ambígua, lanàta, ferrugínea, fúlva, and purpùrea álba; Fúchs*ia* multiflòra, virgàta, &c.; Tigrídia pavònia and conchiflòra, Eròdium Gussòn*i*, Amórpha Lewísii; *L*upìnus mutábilis, mutábilis var. Cruckshanks*iànus*, arbòreus, perénnis, &c.; *O*'robus Físcher*i*, *P*olýgala latifòlia, *A*`pios tuberòsa, Coronílla ibérica, *L*áthyrus grandiflòrus and tuberòsus, *D*ólichos lignòsus, *A*nagállis africàna and Monélli grandiflòra, *C*atanánche cærùlea and cærùlea bícolor; *Liàtris* spicàta, pùmila, sphæröídea, and intermèdia; Centrocárpha hírta màjor, Arctòtis grandiflòra, &c.; *V*eràtrum nìgrum; and the following kinds of the genus *P*hlóx, — Thompsòn*ii*, paniculàta, p. álba, and p. grándis, acuminàta, odoràta, variegàta, maculàta, excélsa, triflòra, tardiflòra, corymbòsa, Wheèler*i*, refléxa, americàna, cárnea, suavèolens, glabérrima, Liston*iàna*, amœ̀na, nítida, elegantíssima, &c. Some varieties of veronicas, geraniums, monardas, and tradescantias are also in bloom.

September. — I now embrace every opportunity that occurs to collect seeds of all the most rare and choice plants. This requires strict attention, and takes up a considerable part of my time during this month. The flower-borders are again looked over, hoed, and raked, and all decayed flower-stems are cut away as they appear. I now also look over the georginas, and cut off all overblown flowers, except a few of the most beautiful kinds, which are left for seed. Cutting away the decayed flowers not only gives the plants a much neater appearance, but causes the succeeding flowers to blow much finer than they otherwise would do; as, if all the seed were left to ripen, the blossoms would be thereby deprived of much nourishment. The turf and gravel are attended to in every respect as usual. Of all the shrubs which adorn the garden at this season, the *A*càcia lophántha and *A*. dealbàta are the most beautiful. These two plants were turned out from the green-house in June, and planted on the turf in a mixture of loam and peat, with a third part of manure from a decayed hotbed. The *A*. lophántha was, when planted out, 5 ft. high; and the *A*. dealbàta was 3 ft. high. The former has now attained the height of 10 ft., and its branches extend 18 ft. in circumference; and the latter has attained the height of 8 ft. I shall take both plants up next month, put them in large tubs, and place them in the green-house for the winter. I doubt not that *A*càcia dealbàta will stand the winter in the open garden, protected by furze, when the wood is become more mature. I have little hopes of *A*. lophántha ever surviving the winter in the open garden. They must, however, both be left out another season, as they will be too large to be taken up; and the result will form a subject for an article in a future Number of the *Gardener's Magazine*, if you consider it will be of any service to your numerous readers. [We shall be happy to receive this article.] The three following are also beautiful plants for setting out on the turf, — *L*upìnus mutábilis var. Cruckshanks*iànus*, *P*olýgala latifòlia, and that superb green-house plant, Leonòtis Leonùrus, which is now standing on the turf 6 ft. high, with twenty-four spikes of flowers, which will expand before the end of the month. This, as well as the *P*olýgala, will be taken up next month, and placed in the greèn-house during winter. The above, and many other green-house shrubs treated in like manner, become very large, and add considerably to the beauty of the garden during the summer months. During this month we have in flower, besides georginas, hollyhocks, tuberoses, &c., the following shrubs and herbaceous plants: — Fúnk*ia* subcordàta, Zephyránthes cándida, Alstrœmèr*ia* psittacìna and *Pelegrìna*, *L*eucòjum autumnàle, *P*aliùrus aculeàtus, Lobèl*ia* *Tùpa*, cœléstis, &c.; Chiròn*ia* *l*initòlia, Fúchs*ia* arbòrea, *C*ássia marilándica, Andrómed*a* speciòsa, Diánthus púngens, *O*'xalis Bowiè*i*, *L*ỳthrum virgàtum, Potentílla Hopwood*iàna*, &c.; Chelòne oblìqua and barbàta, *V*erbèna venòsa, &c.; *A*ntirrhìnum mólle, &c.; *M*ímulus glutinòsus, Eròdium multicaúle, Crotalària élegans, *G*enísta canariénsis, *L*upìnus versícolor, *L*òtus jacobæ̀us, Wistàr*ia* frutéscens, Erythrìna *l*aurifòlia, Erythrolæ̀na conspícua, Hùme*a* élegans, *T*agèt*es* lùcida, Echinàcea purpùrea, Gaillárd*ia* bícolor and aristàta, *O*thónna [?] septémfida, Tradescánt*ia* virgínica and flòre rùbro plèno. Several varieties of phloxes, liatrises, campanulas, œnotheras, asters, salvias, delphiniums, pentstemons, German stocks, German and China asters, and a few varieties of pinks, still continue to bloom.

October. — The leaves of elms and many other deciduous trees and shrubs are now beginning to fall; the flower-garden therefore requires to be swept over daily, which is done the first thing every morning, as I never suffer a barrow or a broom to be seen in the flower-garden later in the day than one o'clock, if I can avoid it. I now begin to take up the more tender green-house plants, and pot them, and place them in their winter quarters, letting such kinds as will bear a slight frost remain a little longer. Should there be any appearance of frost, I cover at night with worsted netting some of the more choice kinds, such as Fúchs*ia* arbòrea, *P*olýgala latifòlia, *L*upìnus mutábilis var. Cruckshanks*iànus*, and some others that are still in full bloom. By this means I have often kept them uninjured till the end of the month, when the fear of losing them by frost prevents my leaving them out any longer. Georginas are taken up as soon as they are touched by the frost, laid out in the sun to dry, and afterwards packed in boxes, and placed in a dry situation secure from frost. The flower-garden is still very gay; but I now expect every day to be the last. The nights hitherto have been favourable, and there is now, October 10., a great number of plants in bloom, such as Lobèl*ia* lùtea, *b*ellidifòlia, bícolor, speciòsa, unidentàta, cærùlea, &c.; Campánula speciòsa; *O'*xalis floribúnda, Déppei, and Bowiè*i*; *L*ýchnis vespertìna; Potentílla Russell*iàna*, formòsa, americàna, and Hopwood*iàna*; *D*elphínium exaltàtum, Garnier*ànum*, and élegans; Magnòl*ia* grandiflòra, Leonòtis Leonùrus; Pentstèmon pulchéllus, venústus, *r*òseus, ovàtus, digitàlis, Richardsòn*i*, &c.; *V*erbèna venòsa, Lambért*i*, Aublèt*ia*, pulchélla, &c.; *M*ímulus glutinòsus, Eròdium Gussòn*i*, Crotalària élegans, Sutherlánd*ia* frutéscens, Coronílla glaúca, *C*atanánche bícolor, Arctòtis aurèola and grandiflòra; *S*enècio élegans, red and white double-flowered; Linària triornithóphora, alpìna, and trístis; Arnopògon Dalechámp*ii*, petunias and nierembergias, Nicot*iàna* fràgrans, all the kinds of salvias aforenamed, a few kinds of phloxes, eleven kinds of fuchsia, annual œnotheras and clarkias, China roses and the crimson perpetual.

November. — The half-hardy and green-house plants being now all taken up and removed to their winter quarters, I proceed to cut away the stems of the herbaceous plants, &c.; and the borders receive a good dressing of leaf-mould previously to being dug; which I perform during this month and December if the weather permit. I now screen all the half-hardy plants, such as Amórpha Lewís*ii*, Azàlea índica, cistuses, and fuchsias, that are left to stand the winter in the open garden, with furze or baskets of wickerwork, which I find answer much better than close coverings, as the plants are not so liable to damp off, and mats are easily thrown over at night should the weather be very severe. I also cover with coal-ashes or moss the roots of Erythrìna *l*aurifòlia, *Tagètes* lùcida, Bouvárd*ia* triphýlla, Watsòn*ia* fúlgida; *O'*xalis Bowiè*i*, floribúnda, and Déppe*i*; Zephyránthes grandiflòra, Alstrœmèr*ia* psittacìna, &c., to protect them from frost. The turf is now swept over twice a week, and mown once during this month, if it be mild open weather. There are but few flowers to speak of during this month; still the garden is not without its charms. We have now the large bright red fruit of *C*ratæ̀gus *O*xyacántha màjor and *Azaròlus*, the snowy white berries of Symphòria racemòsa, and the large glossy green hollies, some almost covered with fruit, and others intermixed with a few clusters of Noisette and common China roses, which still continue to expand among their branches. All tend to enliven the scene at this dreary season.

December. — Very little is doing in the flower-garden during this month. If any borders remain to be dug, they are now finished; and, to such as are planted annually with lobelias, German stocks, verbenas, &c., I give a good dressing of strong stable manure, and dig them over two spades deep. By thus preparing the beds, the plants root deeper, and produce finer flowers than they would do if the ground were not prepared; and, should the summer prove dry, they do not require half the watering they would do if the beds were dug only half the above depth. The turf is now mown down close for the last time this season. If the weather is open, I always mow the last time during this month, as I have proved by experience that the later I mow in autumn, the finer the turf always is in the following spring. It may not be requisite in all gardens to mow so late as December, but much, of course, depends on the mildness of the season and the situation of the garden. The garden here lies rather low, and the soil is a strong loam; consequently the grass continues to grow until near Christmas. I now collect a good heap of leaves, and mix a considerable portion of fresh-slacked lime with them to hasten their decay; and, by turning them over twice or thrice during the ensuing summer, they make fine mould for the flower borders the following winter. The productions of the flower-garden during this month are less numerous than in any other during the year; yet even now it is not without some objects of beauty, or even a few flowers. The Christmas rose (*H*elléborus nìger) is now beginning to expand; a few anemones are also still in bloom; and the *D*áphne neapolitàna, which continues in bloom the whole year, is now in great beauty. In fragrance, this plant is not inferior to the jasmine or the sweetest rose. Among the evergreens (on which the beauty of the garden chiefly depends at this season), the gold, the silver, and the green-edged varieties of *I*'lex *A*quifòlium are objects of great beauty.

Thus far have I attempted to give a correct account of my method of managing the flower-garden during each month in the year. There are many more plants than I have enumerated which flower here during the summer months; but those named deserve a place in every good flower-garden.

Wickham, near Fareham, Hants, JAMES MOORE.
January 10. 1834.

THIS communication must very much avail the young gardener, both in the notice of the successive operations needful to the satisfactory management of the flower-garden, and also, and not less, in the detailed naming of the genera and species of plants which most contribute to its splendour. A few words may be added on hardy bulbous plants, whose efficient service in the object of decoration seems not much insisted on. No plants are more beautiful at any time; but as several genera of them (Galánthus, *C*ròcus, *N*arcíssus, Fritillària, Trichonèma, *S*cílla in some of its species, *Túlipa*, Erythrònium, Gàge*a*) display their very pretty flowers earlier than the time at which herbaceous plants generally are coming into flower, no plants are then so beautiful. Happily, no plants, also, are more free of culture and increase. Only two conditions are, perhaps, imperative with them; a soil not adhesive, and absolute exemption from disturbance while they are in a state of growth. As to soil, though freedom from adhesiveness be its essential requisite, it is capable of all degrees of farther adaptation to the various species of bulbous plants cultivated, by regulating its degree of dryness, and increasing its richness and friableness by the admixture of manure, leaf-mould, sand, &c., and by appropriating to bulbous plants, in preference, those beds or borders which are at once most sheltered, and have the sunniest aspect. That bulbous plants should not be disturbed at all while in a growing state, every gardener well knows; and to every one beginning to be a gardener, bulbous plants will soon teach the fact. The disturbing of them while growing may be rendered needless by marking on a label the kind and colour wanted in any particular spot, placing there that label; and affixing to a clump of the required kind, that includes plants enough to spare some, a label stating its kind and partibleness. In obedience to the same condition of not disturbing bulbous plants while growing, invariably divide and transplant such of them as you wish to part, or deem to need it (most bulbous plants will, perhaps, grow three years without becoming choked by their own offsets), as soon as ever they have ceased growing; a state which they have reached when their leaves have become of a brown colour. Then dig up, part, and replant them forthwith; and of course recollect to occupy the blanks observed and labelled in spring with the kinds and colours noted as wanted in them. The bulbs are now, once for all, in their places, ready to follow their natural habit of emitting roots in autumn for the acquisition of energies to flower freely and finely in the following spring. There is trouble in this mode, and so, unluckily, there is in every other; and by myself the "once for all" mode is preferred, as absolving one from the after-care of "I must get in my bulbs" on this, that, and the other day (as unexpected occupation may cause you to defer the day), and the annoyance of seeing them lie sprouting and shooting, and tacitly chiding you for inconsiderately disabling them from flowering so as "to charm all human eyes" in the spring succeeding. — *J. D.*

ART. X. *On the Management of the Vinery.*

By A YOUNG GARDENER.

IN order to prevent the fruit from suffering from the effects of damp (an evil so often complained of in vineries), the young wood should always be kept thin, by taking the tops from the shoots, three or four joints above the fruit; and not allowing them to ramble through the house, shading the fruit from the sun, and preventing the free circulation of air among the bunches and berries. For the same reason, the lateral shoots, which push from the young wood, should be cut or pinched off at the first or second joint, so as not to endanger the bursting of the bud on the main shoot.

It is well known, that every place from which the sun and air are partially excluded is sure to be damp: the walls of a house, for instance, which are covered with ivy, if it is not in a very dry situation, will be found wet and uncomfortable in the inside.* When this is considered, it will appear evident, that, upon the same principle, the vinery in which the wood is not properly thinned must suffer in the same manner, though in a less degree. Particular attention should be given to the thinning of the fruit; taking out most berries in the heart of the bunch; leaving those towards the extremities; and making the whole very thin. Those kinds of grapes the bunches of which are of a branchy nature, such as the black Hamburgh, the Syrian or white Nice, &c., should always be stretched out a little, and tied up with a small piece of matting, that they may have room to swell, and be kept from crowding each other. This is not only a means of preserving the bunches from damp, but also of having better-swelled and finer-flavoured berries. It is a common practice with those who have fruit in their vineries, when the season is far advanced, to keep up the temperature of the house, throughout the night, with artificial heat, and to let their fires go nearly out when the morning dawns. [See p. 18.] I do not, however, approve altogether of this plan. Let any person go into a vinery in the morning, before it is aired, and when the sun is shining upon it, he will feel the atmosphere moist; and, on examining the fruit, will perceive that it is covered with dew. Now, if this moisture be allowed to remain for any length of time, it certainly must prove injurious; and to remedy the evil seems to be an object worth attention.

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* Ivy, when not fully grown, may be liable to the objections of our correspondent; but when it has grown a sufficient time to clothe the face of a wall with its foliage, no covering whatever can more completely protect it from moisture. Our correspondent's objections apply with their full force to deciduous plants of every kind trained against the walls of houses; and both deciduous plants and evergreens afford protection and breeding-places for many kinds of insects, slugs, &c. We have known snails and earwigs infest bedrooms two and three stories from the ground, in houses, the walls of which were covered externally with ivy. For this reason, we would never have any description of plant, either deciduous or evergreen, trained on a cottage close to the windows. On walls wholly without windows, or architectural ornaments of any kind, ivy will form a valuable protection from rain, and also a non-conductor of heat, either from without or within. — *Cond.*

A very small degree of artificial heat will be found sufficient throughout the night; but, as soon as the sun arises in the morning, and shines upon the house, by increasing the temperature, and giving a sufficient quantity of air, the moisture will be expelled, and the atmosphere of the house will become dry. It may not be unnecessary to remark, that the fruit should be often examined; and, if there are any of the berries on which the damp has taken effect, they should be carefully picked off; as, if they are suffered to remain, the damp will soon spread over the whole bunch.

Mid-Lothian, Sept. 18. 1833. A YOUNG GARDENER.

ART. XI. *Notes on the Cultivation of the Peach Tree.*

By MR. JAMES HART.

THE garden of Sir F. N. Burton, of Burcraggy, county of Clare, lies on a limestone rock, varying from 2 ft. to within a few inches of the surface: the soil is a pure black loam, probably of the same chemical qualities as the yellow; it has the same unctuous feel. The peach trees growing some years ago in this soil and garden could not be surpassed for health, and they bore the most abundant crops of the finest fruit that could be possibly produced. I dare say the crop of 1813 is still remembered in some parts of the county of Clare. Neither mildew nor fly was to be seen on these trees, nor any disease whatever. I had them covered one spring with bast mats; but the last spring that I was there they were not covered at all, yet neither did the trees suffer in the smallest degree from the severity of the weather, nor did the crop of fruit which followed show that any injury had been sustained. One might fancy that these trees enjoyed the privilege of growing among the rocks; they had the appearance of being quite happy. As the garden was small, I had to crop the borders: the crops were winter spinach, early peas, and turnips, and these allowed the borders to be clear during the summer, when I had them mulched about 3 in. thick, with rotten dung from the old hotbeds. The peach tree cannot endure dung that has any strength in it to be dug in among its roots, although it bears the moisture from the dung when filtered through the earth to its roots very well. To the peach tree, strong dung in among the roots is almost instant death; and is at least sure to bring on the mildew, and that so abundantly, as totally to prevent the recovery of the tree.

The above facts suggested to me, that, in making borders for peach trees, when the soil is not naturally suitable, and has to be excavated and carried off, and a loam substituted for it, it will be well to have a part of the excavated border, say to the depth of 3 ft., filled up with large pieces of rock, or lumps of stones, reaching from the bottom to within a few inches of the surface. This provision would prevent the roots from lying in superabundant moisture, and at the same time keep them out of harm's way, and the hazard of being cut with the spade in stirring the ground. The heat of the stones, and the moisture collected about them, would attract the fibrous parts of the roots into contiguity with the stones, and so prevent them from foraging about the surface of the soil in quest of heat and moisture. The cutting of the roots in digging the borders is injurious to the trees in the highest degree; for trees that are so treated, although they grow vigorously through the summer, are still unhealthy, and become the victims of mildew and fly in the peach tree; fly and caterpillar in the plum tree; and caterpillar in the gooseberry bush. The soil and climate are the chief essentials for the health of all plants, and eminently so for that of the peach tree, which, in regard to the soil eligible to it, cannot be kept in health unless in a strong sound loam: no mixtures of soil suit it. The plum tree, the gooseberry bush, and the currant bush, do very well on any soil, provided you do not cut the roots of either in digging, not even by digging dung in among them. Mulch the plum tree with rotten dung, and, when required, loosen the earth with a fork; dung the gooseberry bush and currant bush, and cover the dung applied with earth, as I have mentioned in a former note on these two. (VIII. 694.) The ground must be kept rich about these three, and no curtailment of their roots allowed; if they be not preserved in this condition, but left to poverty, and exposed to a lessening of their roots, they will soon be attacked with disease, and be rendered a prey to the caterpillar, the fly, or the mildew.

Gardeners have long known which is the kind of soil most conducive to the health and welfare of the peach tree. As early as 1809, I had a considerable quantity of border made of a yellow loam for peach trees, for W. S. Poyntz, Esq., of Cowdray Lodge, Sussex. I think it was rather light, but it was the best to be had. In general it has been, not the want of a knowledge of the fittest soil for the peach tree, but the want of knowledge of the after-management, that has caused it frequently to make such a pitiful figure.

The whole of these remarks relate to the nectarine tree equally with the peach tree. JAMES HART.

Drumcondra, Dublin, Sept. 21. 1833.

ART. XII. *On the Laying out and Planting of Fruit-Gardens.* By Mr. JOHN JENNINGS, of the Shipton upon Stour Nursery.

I WISH to direct your attention to the laying out of fruit-gardens. What are termed kitchen-gardens are, in point of fact, fruit, flower, and culinary vegetable gardens, presenting to

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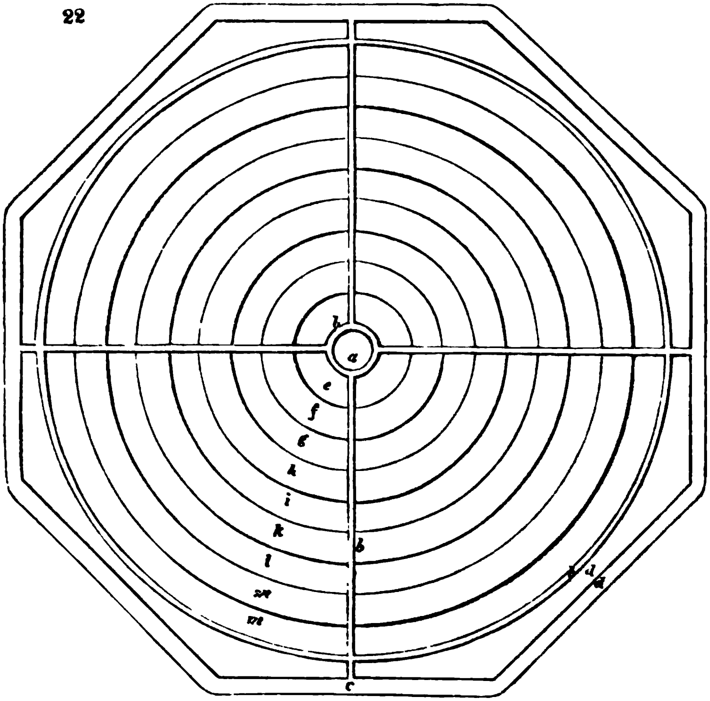

a, Pond of water for the use of the garden. *b*, Walks. *c*, Entrance at the sunk fence. *d*, Borders for wall-fruit trees. *e*, Strawberry zone. *f*, Raspberry zone. *g*, Currant zone. *h*, Gooseberry zone. *i*, Cherry zone. *k*, Plum zone. *l*, Pear zone. *m m*, Apple zone.

the eye an incongruous mass, and ill adapted to the vigorous growth of any article that they contain. It is my wish to see one garden exclusively appropriated to the growth of fruit, and another to that of culinary vegetables. Let each be kept distinct: the flower-garden should be void of fruits and culinary vegetables; the kitchen-garden of fruits and flowers; and the fruit-garden of culinary vegetables and flowers. Impressed with this idea, I have sent the accompanying sketch (*fig.* 22.) of a garden for fruit only; and I think that this or some other similar plan ought to be generally adopted. If some such plan were adopted, it would at once strike at the root of the pernicious practice of digging and cropping among fruit trees; the injurious effects of which have been so often pointed out in this Magazine that they require no farther comment from me. I would recommend the zones to be planted as described in the figure; taking care to keep the different sorts in their proper places, because, by so doing, the fruits, that are generally ravaged by birds, &c., might be easily protected from them by covering the whole centre with netting, in the manner the cherry garden is covered at Hylands. (III. 596.)

The wall is an octagon, with a border for trees on each side; and a sunk fence, with a hedge of common holly and hawthorn, surrounds the whole; thus making an impenetrable fence, and facilitating the draining of the garden, should it be found necessary. JOHN JENNINGS.

Day's Nursery, Shipton upon Stour, Feb. 26. 1834.

ART. XIII. *Short Communication.*

THE Cèreus speciosíssimus at Woodhall gardens, in Renfrewshire, attains an extraordinary size and beauty. The late excellent Mr. Henderson, gardener there, used soil composed of two parts of rich loam, three of decomposed manure, and one consisting of equal quantities of peat, sand, and broken tiles. The plant is placed in a large pot, and trained to the back trellis of a pine stove; where, in July, 1833, when I saw it, it occupied a surface of 84 square feet, and had 300 flowers all open at the same time. Mr. Denholm, the present gardener, gives this and other species of the *Cáctus* family a more ample supply of water than is usually done, while they are maturing their flower-buds; and to this he attributes, in a great measure, the vigour of the bloom. In winter, when the plant is in a state of rest, little or no water is given. — *Juvenis. Glasgow, March* 7. 1834.

REVIEWS.

Art. I. *Transactions of the Horticultural Society of London.* Second Series. Vol. I. Part III. 4to. London, Hatchard.

28. *Journal of Meteorological Observations for* 1829. By Mr. W. B. Booth, A.L.S. Twenty-six pages of figures, and a plate of diagrams.

29. *Description of various Modes of heating by Steam for Horticultural Purposes.* By Mr. Henry Stothert, Civil Engineer, Bath. Read Feb. 21. 1832.

One of the most economical modes of applying steam to the heating of hot-houses is, to apply it to a bed or mass of loose stones. This mode appears to have been first adopted by Mr. Hay of Edinburgh, in 1807 (V. 443., and VIII. 330.); and has been subsequently applied, by the same eminent garden architect, to a number of pine and melon pits in different parts of Scotland. It has also been adopted in England, and on a very extensive scale, in connection with heating pipes and cisterns of water, at the nursery of Miller and Co. at Bristol. Nothing can be more simple than this mode of applying steam. The bed of stones to be heated may be about the usual thickness of a bed of tan or dung; the stones may be from 3 in. to 6 in. in. diameter, hard round pebbles being preferred, as less liable to crumble by moisture, and having larger vacuities between. The pipe for the steam is introduced at one end of the bottom of this bed, and is continued to the opposite end. It is uniformly pierced with holes along the two sides, so as to admit of the equal distribution of the steam through the mass of stones. The steam-pipe may be of any dimension, it being found that the only difference between a large pipe and a small one is, that the steam proceeds from the latter with greater rapidity. The steam only requires to be introduced once in twenty-four hours in the most severe weather; and, in mild weather, once in two or three days is found sufficient. After the steam is turned on, it is kept in that state till it has ceased to condense among the stones, and, consequently, has heated them to its own temperature. This is known by the steam escaping, either through the soil over the stones, or through the sides of the pit; or, when a mass of stones is enclosed in a case of masonry, as in the stone flues of the Bristol Nursery, the point of saturation is known by the safety-valve of the boiler being raised. When we consider the small-sized pipes that may be used for conveying and delivering steam by this mode of its application, there can be no doubt that it is the cheapest mode of heating on a large scale known; and when we revert to the circumstance of its never requiring to be applied oftener than once in the twenty-four hours, and reflect that this renders all night-work unnecessary, the superiority of the plan does not admit of a doubt. In VIII. 330., there is a copious account, illustrated by engravings, of the application of this mode of heating to certain pine and melon pits in Scotland, taken from the *Memoirs of the Caledonian Horticultural Society;* but the description is so encumbered with words, and the engravings with letters, that the simplicity of the plan is rendered, at first sight, so intricate by them, as, no doubt, to deter many from adopting it. Those, however, who wish to know all that has been said on the subject, will revert to that article, as well as peruse the present one. Stothert's application of steam to beds of stones may be thus abridged: —

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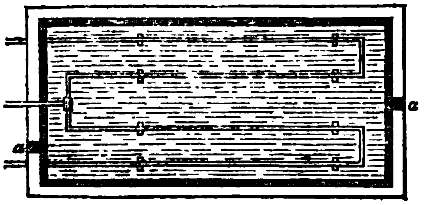

For heating Pine Pits. — *Figs.* 23. and 24. represent a mode of obtaining bottom heat by means of “ a cistern of water heated by small steam-pipes, which are introduced near the bottom, leaving only sufficient drainage to take away the condensed water. The depth of water in the cistern is about 1 ft.; which is warmed, generally about twice a day, by means of two one-inch steam-pipes, each going to the farther end of the cistern, and returning again in the opposite direction, as shown in *fig.* 23.: by this means the heat is very easily distributed. At each end of the cistern, a small passage (*a*) is left, for the purpose of ascertaining the temperature of the water; and this passage will, if left open, admit considerable humidity to the house or pit. Across the cistern are laid joists, which support a paving of stone or brick, laid without mortar, on which is placed a bed of broken stones or bricks, about 1 ft. in thickness, which, towards the top, are about the size commonly used for macadamising the public roads: this is again covered with a bed of ashes, in which the pots are placed, as in the usual way.”

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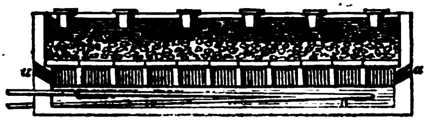

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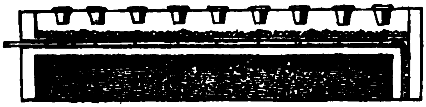

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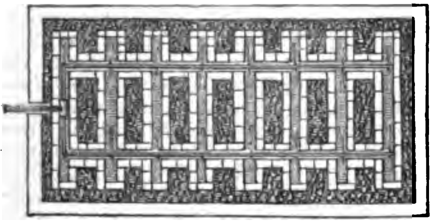

For Bulbs and Cácti, “ a paved water-tight bottom may be built on stones, or any suitable support, with a declivity of 1 in. in 10 ft., to any convenient point for the purpose of drainage, as shown in *figs.* 25. and 26. Channels are formed about 3 in. deep, and the same width, crossing each other, as shown in *fig.* 26.; which also represents two small steam-pipes, each three quarters of an inch in diameter, closed at the farther end, and having perforations about one tenth of an inch in diameter opposite each other, and in the middle of the channels. The result is, that, when steam is admitted into the pipes, it is discharged in opposite directions, through the orifices, filling the whole space of the channels with hot vapour; the channels being covered with brick or stone, jointed without mortar, as shown in *fig.* 26. The vapour which percolates between the joists is arrested by a bed of stones or broken bricks, similar to those used in *fig.* 24., and about 14 in. in depth above the paved bottom: on this, again, is placed a bed of sand, about 1 ft. deep, in which the pots are plunged to any suitable depth. The vapour is so completely arrested by the strata of stones and sand beneath the pots, as to communicate a heat congenial to the health of the plants, without the least excess of moisture.”

For Melon Pits, a hollow chamber is formed over the bed of stones that cover the steam-pipes, as in the plan for pines. (*figs.* 23. and 24.) “ Immediately over the bed of stones are laid joists, supporting a paved bottom, jointed without mortar, on which is placed another bed of stones, &c., about 8 in. thick; and on this is placed the mould containing the plants. The objects of these arrangements are, first, to obtain a perfect uniformity of temperature; and, secondly, to prevent the possibility of any of the roots receiving injury from heat, should they accidentally strike through the mould into the bed of stones; both of which objects are perfectly attained. *Figs.* 27. and 28. represent an elevation and plan of a melon pit erected for W. W. Salmon, Esq., at Devizes, showing also the mode of heating the atmosphere of the pit by flues of loose stones heated by steam-pipes. The arrangement of these pipes, and the paved bottom channels for vapour, &c., are precisely the same as above described; but, in lieu of the bed of broken stones, &c., bricks are here placed edgewise, one over the other, four deep, arranged in the same manner as for burning in a kiln: over these bricks is laid a flat cover, jointed close without mortar; and, on this, the mould containing the plants.”

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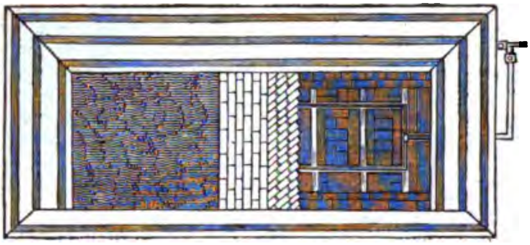

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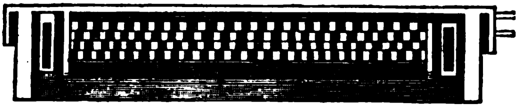

For Aquatic Plants. — *Fig.* 29. “shows a mode of warming a cistern or reservoir of water for the preservation of aquatic plants, as erected at Mr. Miller’s nursery at Clifton, in front of one of the green-houses, and having a glass roof. Steam is admitted by a pipe, three quarters of an inch in diameter, having perforations of about one tenth of an inch at each foot in length; the extremity of the pipe being closed, the steam issues through the small apertures, filling the whole internal area of the large pipe in which it is enclosed, and imparting an equable temperature to the whole extent of surface. This effect cannot be obtained by applying steam in the common way, when but a small increase of temperature is required; as the water immediately in contact with the pipe where the steam is admitted would absorb nearly the whole of its heat, till it arrived at a temperature far beyond what could be allowed in a case of this kind. The dimensions of the reservoir alluded to are about 3 ft. by 3 ft. 6 in., and 20 ft. long. The external pipe is 4 in. inside in diameter; and the condensed water from it is taken away by a small inverted siphon at the farther end.”

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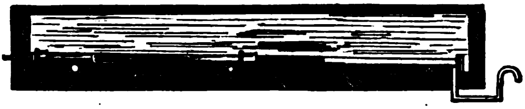

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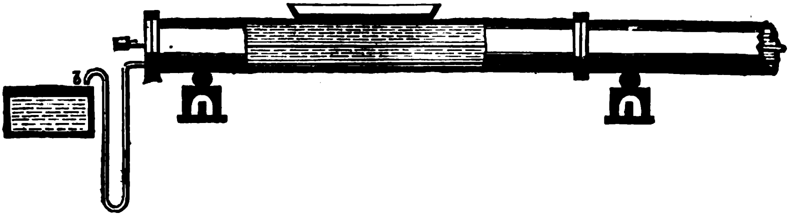

Heating the Atmosphere of Conservatories, Hot-houses, &c. — *Figs.* 30, 31, and 32. “represent a mode of heating water in pipes by the agency of steam.

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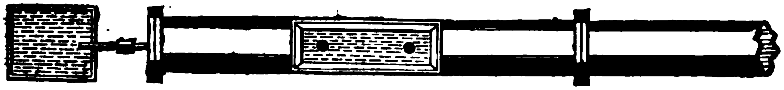

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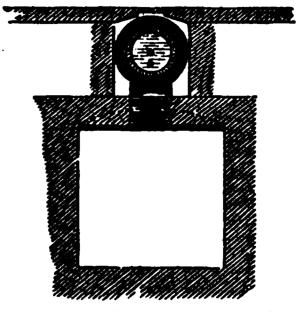

It is well known, that, by the common hot-water apparatus, the heating of an extensive and unconnected establishment of houses by one fire is impracticable in most cases; but, in the mode here represented, the extent of application is in a manner unlimited, whatever be the number or situation of the houses requiring heat. It likewise combines all the advantages of steam, as a conductor of heat, with that of a bulk of water as a retainer. The first adoption of this mode was in a forcing-house, belonging to Mr. Sturge, near Bath. The water-pipes were 8 in. in diameter, and about 28 ft. long. The steam-pipe, of 1 in. in diameter, entering at the centre of one end, and proceeding in rather an inclined direction to the other, is then returned, still inclining, and passed out at the bottom of the bore immediately under the place where it entered: it is then formed into a siphon (*b*) about 3 ft. deep, whence the condensed water is conveyed away. A smaller pipe is also connected with the top of the large one, to receive the increase of water by expansion when heated; which, as the large pipe cools, returns into it again. *Fig.* 32. shows the arrangement of the front pipes under the floor. The air being admitted from the air-chamber underneath, through an opening extending the whole length of the pipes, and passing through the upper chamber on each side of the pipes, is discharged through the grating into the house. The arrangement of the back pipes is similar. Shallow cisterns are connected with the upper part of the pipes, about 18 ft. from each other, by means of hollow screws, which admit the water to pass to and fro reciprocally; the capacity of the cistern is more than sufficient to receive the increased bulk of the water, which expands when heated, and returns again into the pipes as the water cools. The external diameter of the front pipes, in this instance, is 13 in.; and of the back pipes, 10½ in.: each set of pipes is divided in the middle of their length, except that the nearest division of the front pipes returns about half-way round, the end being in length rather more than 60 ft. These water-pipes have 1¼ in. steam-pipes; extending in them their whole length, and returning again, preserving a regular inclination throughout. The back pipes have steam-pipes, of 1 in. in diameter, passing through them in a similar way; and the feeding-pipes are so arranged, that either division of the pipes may be heated separately, or in conjunction with the rest. Another advantage attending this mode of applying heat is, that, as no returning pipes are necessary, as in the common hot-water apparatus, the bulk of water is doubled, with the same extent of heating surface; and the retaining power of the apparatus is doubled accordingly. The cisterns are farther serviceable for regulating the humidity of the house, which can be done with the greatest accuracy by attending to the covers."

Mode of heating the Atmosphere of Conservatories, Hot-houses, &c., by Steam discharged into Cases of Masonry or Brickwork.—*Figs.* 33. and 34. "represent a mode of heating, by introducing steam into cases of stone or brickwork, filled with rubble-stones, or pieces of broken brick. This mode is equally applicable to the largest and smallest establishments. The agent being steam, it possesses the same facility of application as steam applied to hot-water pipes, and, consequently, the same advantages; and may be adopted in conjunction with hot-water pipes or not, as it may be thought desirable. *Fig.* 33. represents a cross section of a case of masonry or brickwork, suitable for a greenhouse of 14 ft. wide, with glazed roof, and 2 ft. 6 in. of glass in front. *Fig.* 34. shows a view of the same, with part of the front taken away at each end to show the inside. The steam-pipes are placed about 4 in. above the bottom, and have perforations of about one tenth of an inch in diameter;

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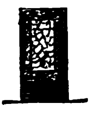

which vary from 15 in. to 18 in. asunder throughout their whole length, but become more frequent at the farther end, which is closed. The general direction of the holes is upwards, except some few in the bottom, to keep the pipe clear of condensed water. The case being built inclining towards the most convenient spot for draining, the condensed water is taken away by a small siphon, about 3 in. or 4 in. deep, as shown in *fig.* 34. A steam-pipe of 1 in. diameter is sufficient for a case of 50 ft. in length; and, if proper attention be paid to the dimensions and distance of the holes, which, in this instance, need not be above one sixth closer at the farther end than at the commencement, the temperature at one end of the case will scarcely differ perceptibly from that at the other; an effect utterly unattainable in the best constructed fire-flue, which, in appearance, it so much resembles. There is, however, no particular proportion of the height to the breadth; that depending entirely on convenience. Where freestone cases are used, it is found necessary that they should receive two or three coats of linseed oil, to prevent the escape of steam through them. It is better to give moisture to the house by steam-cocks fixed at the top of the cases, as shown in *fig.* 34.; humidity can then be regulated at pleasure."

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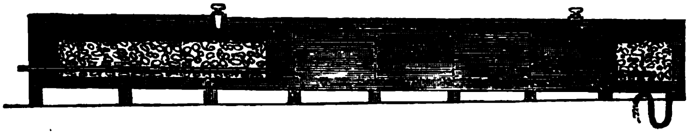

Art. II. 1. *Paxton's Magazine of Botany and Register of Flowering Plants.* By Joseph Paxton, F.L.S. H.S., Editor of the Horticultural Register, &c. Nos. I., II., and III., for February, March, and April, 1834. Small 4to. 2*s.* each.

2. *Maund's Botanic Garden.* In monthly Numbers. Small 4to. 1*s.* each.
3. *Harrison's Floricultural Cabinet.* In monthly Numbers. 8vo. 6*d.* each.
4. *Harrison's Gardener's and Forester's Record.* In monthly Numbers. 8vo. 6*d.* each.
5. *Paxton's Horticultural Register.* In monthly Numbers. 8vo. 1*s.* each.

In the introduction to *Paxton's Magazine of Botany,* we are informed that the high price of some botanical periodicals "places them beyond the reach of most flower cultivators: while the cheap periodicals, although unobjectionable in respect to price, are manifestly defective in other points of greater importance; the plates they contain bearing but little resemblance to the plants they are intended to represent. To obviate these objections, each number of the *Magazine of Botany* will contain four engravings of plants, of the natural size, beautifully coloured from original drawings," &c. (p. 2.) The work may, therefore, be considered as something intermediate between the *Botanical Register,* monthly, at 4*s.*, and the *Floricultural Cabinet,* monthly, at 6*d.* It has no pretensions to being an original botanical work; and, therefore, it may fairly be compared with Maund's *Botanic Garden,* and the *Floricultural Cabinet.* In estimating its value relatively to these works, the first observation which we shall make is, that figures, "beautifully coloured," of plants already in the nurseries and gardens, are of no value whatever to the practical gardener, beyond that of being ornaments in the line of his profession. What reading gardener, for example, who could afford to expend in books 2*s.* monthly, would give that sum for a work, the principal recommendation of which is, that it consists of finely coloured engravings of such plants as *Ribes* sanguíneum, Schizánthus retùsus, *Petùnia* violàcea, and Streptanthèra cùprea (the four plants figured in Paxton's No. i.), all of which have been in the nurseries for several years? The same may be said of the figures of plants in Maund's *Botanic Garden*, and in Harrison's *Floricultural Cabinet*. All three works we consider to be out of the question with reference to the reading gardener, as far as it respects their figures. We shall next compare them as to their letterpress, meaning that part of it which treats of culture and management. Here we find that Maund's work is exceedingly meagre, as compared with either Paxton's or Harrison's. The two latter, in point of the quantity and quality of the practical information which they contain, appear to us to be as nearly as possible on a par; and, therefore, considering that the price of the one is 2*s*., and of the other only 6*d*., we need not say which we think best suited for the practical cultivator of flowers. Harrison's *Cabinet*, indeed, we consider to be one of the most useful of the floricultural periodicals of the day, as it is also, we believe, by far the most extensively circulated; and though its coloured figures, which vary from one to six in each number, are inferior both to Mr. Maund's and to Mr. Paxton's in execution, yet they are sufficiently accurate to give a tolerably good idea of what they are meant to represent. Compared with the figures in Mr. Maund's work, we greatly prefer those in the *Floricultural Cabinet*, as approximating nearer to the natural size; for, in the *Botanic Garden*, they are so reduced, and the large, as well as small, confined to so diminutive a square, that a general observer can scarcely obtain a really useful impression on his mind, of the natural appearance of the plant. Notwithstanding this, however, Mr. Maund's publication has done a great deal of good; but Harrison's *Cabinet*, as may be expected from the lowness of its price, and the great quantity of excellent practical matter which it contains, will penetrate much farther into the mass of society.

To return to *Paxton's Magazine:* on looking over the three numbers before us, we find them distinguished by the same characteristics as the *Horticultural Register*. There is, however, less general carelessness with regard to language, but there are more plagiarisms; though not quite so many quotations from the Gardener's Magazine. As plagiarisms from that work, we refer to some or all of the woodcuts in pages 12. 23, 24. 36. and 47., which are either facsimiles of cuts that first appeared in the Gardener's Magazine, or very trifling variations from them, taken without the slightest acknowledgment. With respect to plagiarisms in the *Horticultural Register*, we shall only refer to the article signed Peter Mackenzie (vol. ii. p. 512.), and to the Notes on Mildew, in the same volume (p. 327. and 328.), the latter with cuts; because, having spoken to Mr. Paxton on the subject, he promised to discontinue these plagiarisms, and we believe he has done so. The quotations, however, from our work are as numerous as ever; there being, in the *Horticultural Register* for April last, no fewer than five articles from the preceding number of the Gardener's Magazine, and these too inserted under the head of Original Communications!!! Two of these articles have engravings, one of which was taken from a drawing made, at some expense, from a tin model sent to us; while Mr. Paxton had nothing more to do than to tell his wood engraver to copy it from our woodcut; the expense to him thus being not a tenth part of what it was to us. This is not only ungenerous in Mr. Paxton towards us, but unjust towards the public; for it is deceiving the public, to call that original which has already appeared in another work. We cordially approve of cheap publications, and of cheap Gardener's Magazines among the rest; but this cheapness should be produced by fair competition, otherwise it will soon cease either to benefit the public, or to act as a stimulus on the competing parties. It is perfectly allowable to quote from a magazine into a larger permanent publication, and the contrary. It is even fair to quote from a magazine that has been several months before the public, into another magazine; or to quote from a magazine treating on one subject, into a magazine which treats on another subject: but the sense of justice, implanted by civilisation in the human breast, must tell every man that it never can be fair, in the editor of one magazine, to fill his pages from another magazine of the same kind, which has just appeared. Every one who knows any thing about getting up a magazine, knows that to receive a MS. communication and an original sketch or perhaps model, or to have liberty to inspect the original and make a drawing from it, having afterwards to prepare these for the printer or the engraver, is a very different thing from printing or engraving from articles already engraved or printed. We may safely state that, on an average, the expense is treble in one case what it is in the other. Now, supposing it were lawful to copy the greater part of one magazine, just after its appearance, into another magazine sold at the same price; it is evident that, while the magazine containing original matter was losing, the other which copied from it would be making a handsome profit. The losing magazine would have no alternative, but either to give up appearing, or to adopt the practice of the other, and to take its articles ready prepared from some other published work. Both magazines, in consequence of this, would be rendered almost worthless to the public. This is an extreme case, put hypothetically, to show what unfair competition is, and what would be its consequences to individuals and the public.

A good deal of borrowing, and some plagiarism, were carried on for some time by Mr. Harrison. The article on the pronunciation of botanic names, in No. i. of the *Floricultural Cabinet*, was taken verbatim from us, without the slightest acknowledgment; and one number of the *Gardener's Record*, we forget which, was almost entirely made up from the Gardener's Magazine. Having written at that time to Mr. Harrison, he has since been more moderate, and we hope he will continue to be so.

We may observe here, that numerous articles are taken verbatim, both by Paxton and Harrison, from the Gardener's Magazine, which we had translated for that work, from the French, German, or Italian, and the name of the original work is given as the sole authority. This is a most disingenuous mode, altogether unworthy of that straightforward conduct which alone can permanently insure public confidence. Much as we deprecate this practice, we do not consider it nearly so bad as that which Mr. Maund commenced some months ago, noticed IX. 457. The amount of injury which would be done by Mr. Maund to us, or to any other person from whom he might choose to quote in the manner described in the page referred to, might possibly not be very great; but a more disingenuous mode of quoting, or one more repugnant to our feelings, we have not met with since we commenced our literary career.

Though we have travelled far from *Paxton's Magazine of Botany*, we return to it to say, that we think it will be very useful to the manufacturers of articles which are decorated with figures of plants; such as cotton-printers, porcelain manufacturers, paper-hanging manufacturers, &c. To botanists it is of no use; as the plants are neither new, nor described with scientific accuracy. Gardeners who wish to become acquainted with the newest plants, and the proper method of describing them botanically, will consult the *Botanical Register*, the *Botanical Magazine*, or *Sweet's British Flower-Garden;* and for the gardener who does not pretend to much botanical knowledge, the amateur in moderate circumstances, and the floricultural operative, there is the *Floricultural Cabinet.*

ART. III. *Catalogue of Works on Gardening, Agriculture, Botany, Rural Architecture, &c., lately published, with some Account of those considered the most interesting.*

THE Journal of Botany, being a second Series of the Botanical Miscellany: containing figures and descriptions of such plants as recommend themselves by their novelty, rarity, or history, or by the uses to which they are applied in the arts, in medicine, and in domestic economy; together with occasional botanical notices and information. By Wm. Jackson Hooker, LL.D. F.R. A. & L.S. &c. Parts I. and II. 8vo. London, 1834.

We are glad to see a new series of this work commenced at a reduced price. To botanists in every part of the world, it will be alike interesting; and even the mere horticulturist, and the general reader, will occasionally find scraps "in the arts, in medicine, and in domestic economy," which will interest him. For example, it is stated that the inferiority of the dried figs of Madeira is owing to the radiation of heat from the figs while drying; in consequence of which, instead of their becoming properly dry, moisture is deposited on them from the warm circumambient atmosphere. (p. 32.) In Dalmatia, a botanist, without stirring from the spot where he was sitting, could at once collect twenty-one different species of plants, of which only two are to be found in Germany. (p. 79.) Observations on some of the classical plants of Sicily, by John Hogg, M.A. F.L.S. &c. (p. 98.) contain many curious notices, in addition to those, by the same writer, which will be found in our *Mag. Nat. Hist.*, vol. iii. p. 105. But we refer the reader to the work itself.

The Practical Irrigator or Drainer. By George Stephens, Land-Drainer, Irrigator, &c. A new edition. 8vo. London, 1834.

Having before given some account of this work (V. 317.), and characterised it as "plain and practical," we have only now to state that this new edition has received considerable additions and improvements, and that we think the work, taken altogether, is the best extant on the subjects upon which it treats.

An Address to the Owners and Occupiers of Land in Great Britain and Ireland, on the important Discovery of the Decomposition of common Salt, for the Purposes of Manure; whereby an Acre of Land is prepared for the Reception of any Crop, at a Cost of Ten Shillings only. By Henry Kemp. Pamph. 8vo. London, 1834.

The substance of this pamphlet of 72 pages is, that soda, sown on poor land, at the rate of 10*s.* worth per acre, will add a third part to the agricultural produce; that the author has discovered a cheap mode of liberating soda from common sea salt: but that, before he discovers this to the public, he must either have a reward from parliament, or a handsome subscription. If he cannot get either, perhaps he will try Mr. Sutton's mode of publishing. (p. 154.)

The Calendar of Nature; or Natural History of the Year. With twelve designs, by George Cattermole. 12mo. London, 1834.

This is a reprint of a work, by the late Dr. Aikin, with additions to the letterpress, and a series of most beautiful wood engravings. It is well calculated for giving young persons a taste for natural history, and for reminding all, in a few words, of the characteristics of each month. We can therefore strongly recommend it to them who either love the country, or who wish to infuse a taste for its peaceful occupations and harmless enjoyments into their children.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

A STATISTICAL Society, that is, a society for collecting and arranging facts of every kind, as well agricultural as topographical, moral, political, &c., was formed in London, on March 14th. It may be considered as a branch of the British Association for the Advancement of Knowledge; and, what that association is likely to effect for science, this is intended to do for the social condition of mankind. A Statistical Society was founded three or four years ago in Paris, and similar societies are now forming in other countries. This disposition of mankind to associate together for common objects, will lead, at no distant period (viz., at the time when representative governments shall have become general), to European, American, and Cosmopolitan Societies, composed of members of all the governments of Europe, America, or the world, meeting together to devise plans for the good of all mankind. Among these will be, universal education, a universal system of weights, measures, and moneys, one common language, one common law, and universal freedom of commerce. As to the question of peace or war, there will be very little danger of the latter, when it is not the interest of any particular class of men to make it. — *Cond.*

To poison Moles. — Collect earthworms, kill them, and mix them with the powder of nux vomica. After the mixture has remained in a heap twenty-four hours, strew a few of the worms in the holes and paths of the moles. (*Bulletin Universel.*)

Art. II. *Foreign Notices.*

NORTH AMERICA.

The Magnificence and Splendour of the Forests of North America are peculiar to that division of the world. "In Europe, in Asia, in Africa, and even in South America, the primeval trees, how much soever their magnitude may arrest admiration, do not grow in the promiscuous style that prevails in the great general character of the North American woods. Many varieties of the pine, intermingled with birch, maple, beech, oak, and numerous other tribes, branch luxuriantly over the banks of lakes and rivers, extend in stately grandeur along the plains, and stretch proudly up to the very summits of the mountains. It is impossible to exaggerate the autumnal beauty of these forests; nothing under heaven can be compared to its effulgent grandeur. Two or three frosty nights, in the decline of autumn, transform the boundless verdure of a whole empire into every possible tint of brilliant scarlet, rich violet, every shade of blue and brown, vivid crimson, and glittering yellow. The stern inexorable fir tribes alone maintain their eternal sombre green. All others, in mountains or in valleys, burst into the most glorious vegetable beauty, and exhibit the most splendid and most enchanting panorama on earth." (*M'Gregor's British America*, 1831.)

To render the woods of Europe in some degree like those of America, we have only to plant American trees. All of those which produce the brilliant colours spoken of by Mr. M'Gregor, are as hardy as the native trees of Britain. They are chiefly oaks, acers, birches, liquidambars, pines, &c., of different sorts, all of which may be purchased, in plants of three and four years' growth, in our principal nurseries; or, in the state of seeds, from those seedsmen, such as Mr. Charlwood, who import American seeds on a large scale.

Art. III. *Domestic Notices.*

ENGLAND.

Kensington Gardens. — The woods in these gardens, which we have before described as thin with excessive thickness, have undergone a second weeding in the course of last winter; and they will bear several more thinnings in succeeding years, till the trees have sufficient room to admit of their putting out lateral branches, and thus preventing the masses from being seen through. It is also said to be the intention of government to take down the boundary wall of the south side of the garden, and substitute an open iron railing. If this be done on the south side, where there are no houses along the park road, it is to be hoped that it will also be done on the Bayswater side. There, besides the great improvement which it would be to the entrance to London by Oxford Street, it would abate a great public nuisance: the numerous angles formed by the crooked line of the wall, and the numerous buttresses raised from time to time to keep it from falling, forming receptacles for every description of filth. The inhabitants of Bayswater petitioned for the removal of this wall some years ago, and they were answered by putting the question, will the inhabitants pay the expense? We now, in our turn, ask who will pay the expense of taking down the south wall? since there are no houses close to the road, which can be called on to do so? Till we know to the contrary, we shall conclude that the expense is to be incurred by government, for the gratification of that part of the aristocracy who drive along the park road close to the wall, in order to enter the gardens by the south gate. Either Kensington Gardens are public property, or they are not. If they are, they ought surely to be managed with a view to the whole of society, and not merely to the gratification of a small part.

We never speak of these gardens without being ready to exclaim, How delightful and instructive they might be made, by the addition of a great variety of American and other exotic trees and shrubs! but the time does not seem arrived for expecting any thing of this kind. Even in Hyde Park, where a number of trees are now planting, no kinds are made use of, but the very commonest sorts; and this, while in many of the nurseries there are hundreds and thousands of large forest trees, choice oaks, acers, horsechestnuts, sweet chestnuts, ashes, birches, purple beeches, American limes, liquidambars, tulip trees, gleditschias, robinias, deciduous cypress, cedars, pines, firs, and dozens of other genera, so large, that, in a year or two, if not sold, they will have to be burnt.

The Zoological Gardens have lately received presents of herbaceous plants from the Kew, Edinburgh, and Glasgow Botanic Gardens. We hope each genus will be planted by itself, so as to form irregular, scattered, straggling groups along the borders; and that they, and also one specimen of each of the better kinds of trees and shrubs, will be named in a conspicuous and durable manner.

At the Metropolitan Flower Show held at the Crown and Anchor tavern, April 16., there were a number of very fine specimens of choice green-house plants; many fine hybrid rhododendrons, some very beautiful Ghent azaleas; and, as might be expected, a great many choice auriculas. There was one of the finest specimens of Hòvea Célsi which we ever saw, and one equally remarkable of Dillwýn*ia* glycinefòlia; both, we believe, as well as a number of the Ghent azaleas, sent by Mr. Harrison of Cheshunt, one of the greatest encouragers of gardening in the neighbourhood of London. There was a fine collection of named auriculas sent by Mr. Groom, and an assortment by Mr. Glennie, which last seemed to have carried off most of the prizes. The number of persons who came to view this exhibition was very considerable; and if it were found practicable to continue it for two or three days at a small rate for each person, there can be no doubt that it would tend to spread a taste for fine flowers, and more firmly to establish this very useful society.

Grapes and Strawberries were exposed for sale in Covent Garden market early in April, and we find by the *Cork Constitution* newspaper of March 29th, that grapes and pine apples were sent off from Lord Doneraile's garden on the 28th of March.

Grafts of the best Varieties of Apples and Pears are advertised to be sold by Mr. Saul of Lancaster, at 4*d*. each. Why should not nurserymen and the horticultural societies who have gardens, do the same thing?

The Sheffield Botanical and Horticultural Garden is commenced; and Mr. Marnock, late gardener at Bretton Hall, is appointed curator. Mr. Marnock was also the successful competitor in the plan for laying out the garden: a circumstance which does him great honour, and will be no small advantage to the garden; since not only gardens and grounds, but even houses, and other architectural and engineering works, are often materially injured in the execution, from the want of accordance between the mind of the designer and that of the executor. The second prize for a plan was given to Mr. Taylor, an architect of Sheffield. There were other plans also exhibited, which, it is said, possess considerable merit. We should like to see the whole of them; and this gratification their authors might easily afford us, by sending us tracings and descriptions. — *Cond.*

The Colony at Lindfield is flourishing: we have now six cottages for labourers, with an acre and a quarter of land, which we let for 3*s.* a week each; we have six more with the same quantity of land at 2*s.* 6*d.* a week each; and other six with still the same quantity of land, at 2*s.* a week; that is, eighteen in all. Besides those, we have seven cottages more, with from five to six acres of land attached to each; all tenanted, and going on well. The school farm, cultivated mostly by the boys, is also in excellent order. — *Wm. Allen. Paradise Row, 24th of the third month (March)*, 1834.

The Milford Nursery.—We all went out to call on Mr. Young, agreeably to your recommendation, and were highly gratified. Mr. Penny is a most interesting person, enthusiastically devoted to botany, and evidently hoping and believing that he will be able to make this nursery the first in the world. Mr. Webb, the proprietor, gives them every encouragement, and they tell us that he has promised to open a correspondence for them with the principal nurseries and botanic gardens on the Continent; independently of the seeds, which he will, of course, send to Milford in preference to any where else.

You are no doubt aware that Mr. Webb, assisted by M. Bertholet and Decandolle, is about to publish a flora of the Canary Isles, and that many of the plants which will appear in that flora are already at Milford, though their names have not been published. We found Messrs. Young and Penny sowing a large collection of seeds collected by Brotero and others, in South America, which had been sent them by Mr. Webb, and many of the seeds which you sent (p. 170.) are already up. They have just finished building a green-house 100 ft. long, a pit of the same length, a stove 50 ft. in length, and a turf pit 360 ft. long, and 6 ft. wide, exclusively devoted to fine specimens from the Canaries, Teneriffe, Madeira, and South America. We saw in it some fine statices, alstrœmerias, mahonias, berberis, &c. They are preparing a border about 500 yards in length, and 9 ft. in width, in which to display their more choice herbaceous plants and flowering shrubs; and, as to trees, you are aware what an extent their arboretum occupies. All this, we take it upon us to state from recollection chiefly, but the following list of plants in flower was given us in writing by Mr. Penny:—Cinerària cèna, Onònis pedunculàris, Taxanthèma pubérula, Lòtus spectábilis, Cýtisus tetragonócladus (a new species, allied to C. canariénsis, both fragrant), Scrophulària elongàta, Sempervìvum cruéntum, Euphórbia atropurpùrea, Lavátera acerifòlia, Vìola pulmonénsis.—*S., W., and E., M. Guildford, March* 23. 1834.

Scions of a new seedling Pear, which we have called Haydon's seedling, have been sent us by a correspondent of that name, residing at Mount Radford, near Exeter. The seed was sown in 1823, and the tree is now a standard, 16 ft. high. The fruit is ripe about the middle of October, and is remarkable for its luscious sweetness, but it does not keep. It began to bear in its ninth year, and appears to produce abundantly. This fruit has twice obtained a prize. — *Sam. Haydon. Mount Radford Terrace, near Exeter, March* 19. 1834.

We have sent the scions to the Horticultural Society's garden, and shall be glad to taste the fruit, when the season for doing so arrives.—*Cond.*

SCOTLAND.

Woodhall Gardens, Renfrewshire.—On calling here, during a short tour which I lately made, I was agreeably surprised to find that, in addition to the gardener's lodge or shed, in which with the rest of the young men I cooked my victuals and slept some years ago, a good-sized room was built, well lighted, with a good fireplace, and fitted up with writing-desks, tables, and bookshelves. There is a lobby between this and the cooking-room, so that the noise produced in that room, by those who do not read, is not heard in the reading-room. This last circumstance I consider an important one. A room similar to this at Woodhall is wanted in almost every garden in Scotland. — *Juvenis. Glasgow, March*, 1834.

ART. IV. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly Number containing eight plates; 3*s.* 6*d.* coloured, 3*s.* plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly Number containing eight plates; 4*s.* coloured, 3*s.* plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Sweet's British Flower-Garden; each monthly Number containing four plates; 3*s.* coloured, 2*s.* 3*d.* plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

DICOTYLEDONOUS POLYPETALOUS PLANTS.

IX. *Cruciferæ.*

1827*a*. STREPTA'NTHUS *Nut.* (*Streptos*, twisted, *anthos*, flower; claws of petals twisted.) 15. 2. Sp. 2. —

obtusifòlius *Hook.* blunt-lfd. ○ or 1¼ au.s Ro Arkansa 1833. L a.l Bot. mag. 3317

A pretty plant, much resembling Moricándia arvénsis. The stem is simple or branched; the leaves are glaucous, elliptic, stem-clasping. The branches terminate in long racemes of numerous flowers; whose petals are of a fine rose colour, with a very deep lake-coloured spot at the base of each limb. A second species, named S. maculàtus, is known in America; but we are not informed that this has yet been introduced to Britain. (*Bot. Mag.*, April.)

XLVI. *Cácteæ.*

1472. CE'REUS.

28898*a* splèndidus splendid-*corollaed* ≋ ⊔ spl 1 s.n S Mexico 1831. C.a.l.ru Paxton's mag. [of bot. i. 49. with a figure

" Epiphýllum Hitchènì [the name of the author of the epithet not stated], scarlet flowers, nearly 8 in. in diameter" *Hitchen* in Gard. Mag. Feb. 1833, vol. ix. p. 114.; Epiphýllum splèndidum *Paxton* in his Magazine of Botany, i. 49., with a coloured figure, April, 1834.

Its flower, in size and splendour, far surpasses the flower of any other species or variety at present known. We obtained it from Mr. Hitchen's celebrated collection of succulent plants, while this collection was in the possession of Mr. Hitchen; who has since sold it to Mr. Frederick Mackie, nurseryman, Norwich [see p. 63.]. Its flowers were stated to be 10 in. broad; which we feel not the shadow of a doubt about, as ours, though [produced by] a very small plant, in October, 1833, measured, when in full blow, 8 in. in diameter. Neither the C. speciosíssimus, nor even the C. grandiflòrus, will bear a comparison with it in size of flower. Its flower is entirely destitute of that beautiful purple so characteristic of the flowers of the C. speciosíssimus; and has something of an orange colour, all the petals being nearly transparent. In point of the shape of the flower, and in some other respects, it bears a good deal of resemblance to the C. speciosíssimus. (*Paxton's Magazine of Botany and Register of Flowering Plants*, April.)

LXXVII. *Leguminòsæ.*

†2154. *LABLA'VIA.* (The name *Lablab* means, in Arabic, simply, a twining plant; and is applied indiscriminately to the convolvulus and many others of similar habit. I have, besides giving it a Latin termination (which should, I think, be always done in the case of barbarous words adopted in botanical nomenclature as generic names), also changed the *b* into *v*: a liberty which the genius of the Arabic allows. — *D. Don.*) 17. 4. Sp. 5. —

19484 vulgàris as in *Hort. Brit.*, except that the figure in Sw. Fl. Gar. 2. s. 236. is preferable to that in Bot. Mag. 896.

2 purpùrea *Dec.*

Láblab purpùreus *G. Don* in Hort. Brit. No. 19485., *Dólichos* purpùreus *Jac.*

3 albiflòra *Dec.*

Láblab bengalénsis *G. Don* in Hort. Brit. No. 19486.; *Dólichos* bengalénsis *Jac.*; and Mr. D. Don teaches, in Sw. Fl. Gar. 2. s. 236. (and, in doing so, goes farther than Decandolle), that the following names are but synonymes of this variety: — Dólichos álbus *Lour.*, *D. Láblab* Gærtner, *Láblab* nankinicus *Savi*, and *Láblab* leucocárpus *Savi*.

Lablàvia vulgàris is cultivated in India, China, Egypt, and many other countries of the East, and also in the West India Islands, on account of its legumes, which are prepared and eaten in the manner those of kidneybeans are in Europe. It is an extremely showy plant; and is admirably suited for being trained to trelliswork or over a veranda. Mr. Little, nurseryman, King's Road, Chelsea, has cultivated it for some years as an ornamental plant; and he finds it to be quite as hardy, and to require the same treatment, as the kidneybean. Its seeds ripen in the open air. (*The Brit. Flow.-Gard.*, April.)

CLVII. *Begon*iàceæ.

2654. BEGO'N*IA*. [Bot. reg. 1668
†28661 *heraclei*f*òlia* Schlecht. & Cham. Heracleum-lfd. ✱ △| or 2 all sea Ro Mexico 1831. O r.m
B. radiàta *Graham* in Edin. New Phil. Journ. July, 1833.

It is a very free-growing hot-house plant, producing its rosy flowers in every month of the year. All that it demands at the hands of the cultivator are, heat, moisture, and a full exposure to light. If kept too much in the shade, the flowers lose the bright rosy tint which is natural to them, and with it their beauty. Some of the leaves produced by this species are 7 in. across. Plants of it are in the Edinburgh Botanic Garden, the London Horticultural Society's garden, and in other gardens. (*Bot. Reg.*, April.)

Dicotyledonous Monopetalous Plants.

CXC. *Cinchon*àceæ.

389. MANE'TTI*A*. [Sw. fl. gar. 2. s. 233
glàbra *Cham. & Schlecht.* smooth-*surfaced* § ⊔ or 5? au.d S Buenos Ayres 1831. C p.l
M. cordifòlia *Hooker* in Bot. Mag. t. 3202., Gard. Mag. 9. 107.
" It is, doubtless, the M. glàbra of Chamisso and Schlechtendal; who enumerate, in the *Linnæa*, several other nearly related species, differing chiefly in the degree of pubescence, and in the proportions of the calycine segments. — *D. Don.*

This is an exceedingly elegant plant: its delicate and graceful form, and its long (1½ in.), tubular, scarlet corollas, contrasted with its broad deep green leaves, render it one of the most beautiful objects that can well be conceived. Mr. Neill of Canonmills, near Edinburgh, has raised and possesses this plant. It thrives in soil composed of peat and loam. " It will doubtless succeed well in the open border during summer." (*The Brit. Flow.-Gard.*, April.)

CXCVI. A*pocýneæ*.

ALY'XIA *R. Br.* In the *Bot. Mag.* for April, this genus is much elucidated. Mr. Allan Cunningham has supplied the distinctive characters, synonymes, and habitats of eleven species. A. actinophýlla *Cun.*, spicàta *R. Br.*, tetragòna *R. Br.*, stellàta *R. & S.*, *l*aúrina *Gaudichaud*, obtusifòlia *R. & S.*, scándens *R. & S.*, Gynopògon *R. & S*, *d*aphnöides *Cun.*, *r*uscifòlia *R. Br.*, *b*uxifòlia *R. Br.* Dr. Hooker has added to these the names of six other species, which are also known; namely, A. odoràta *Wall.*, stellàta *R. Br.*, calophýlla *Wall.*, lùcida *Wall.*, olivæfórmis, and Torres*iàna*. This enumeration is accompanied by a figure of A. *d*aphnöides *Cun.*, and one of A. *r*uscifòlia *R. Br.*; and detailed descriptions, by Mr. Cunningham, of these two species. From these descriptions, and those in the enumeration, we revise the species given in *Hort. Brit.* p. 67. and 580.

532. ALY'XIA.
4573. Gynopògon *R. & S.* bearded-styled ■ ⊔ or 5 ... W Norfolk Island 1831. C p.l
Gynopògon Alýxia *Forster*, Alýxia Fórsteri Cun. MSS. 1830, Loudon's Hort. Brit. No. 28594.
4574 *d*aphnöides *Cun.* Daphne-like ■ ⊔ fra? 5? W Norfolk I. 1831. C p.l Bot. mag. 3313
4574*a* *r*uscifòlia *R. Br.* Butcher's broom-lfd. ■ ⊔ fra 5 au.n W N. Holl. 1820. C p.l Bot. mag. 3312
A. Richardsòni Swt., Loudon's Hort. Brit. No. 4573.; Gynopògon pugionifórmis *Cun. MSS.* 1828; Alýxia pugionifórmis *Cun.*, Loudon's Hort. Brit. No. 28595.
More of the species enumerated above may be extant, alive, in British collections; but it is not stated that more than the three which we have tabulated are.

The alyxias are not attractive-looking shrubs; but their foliage is pleasing: and the leaves are, in several of the species, disposed four in a whorl; the flowers, small and white, are, in A. *r*uscifòlia, " exceedingly fragrant, smelling like jasmine;" and, it appears, in some other species as well. (*Bot. Mag.*, April.)

537. *E*CHI'TES.
stellàris *Lindl.* star-*eyed-corollaed* § □ or 10? au Ro.Y Rio Janeiro 1831. R p.l Bot. reg. 1664
Its characters approach nearly to those of *E.* pubéscens *Willd.*

A tender, stove, climbing plant, introduced by the Hon. Robert Gordon to the Horticultural Society. In the month of August, its flowers [which are represented as produced in corymbose clusters, each of about fourteen flowers, and these severally wider, in the spread of the limb, than a shilling is broad] perfume the part of the hot-house in which it is placed with a delightful smell of primroses. . . . . We have named it with reference to the coloured eye of the corolla; which, being deep rosy red in the centre, with five starry lobes, bordered with a sort of orange yellow, gives a striking appearance to the flowers. *E.* stellàris grows readily in peat and loam; but is scarcely to be propagated except by cuttings of the root. (*Bot. Reg.*, April.)

CXCIX. *Convolvulàceæ.*

491. IPOMŒ'A. [Bot. mag. 3315
4083*a* Horsfállie Hook. *Mrs.* Horsfall's ♄ ☐ spl 20 d.ja Ro Africa? East Indies? 1831? C p.l

" Unquestionably one of the most beautiful of all the species to descriptions of which I have had access, as well as of a most extensive collection of species of the genus in my herbarium. The seeds, from which plants of it have been raised, were received by Charles Horsfall, Esq., Everton; under the care of whose very skilful gardener, Mr. Henry Evans, the plants produced their lovely blossoms, in great profusion, during December, 1833, and Jan. 1834: a season when so gay a visiter to the stove is particularly welcome..... Leaves quinate, upon rather long petioles. Peduncles axillary, about as long as, or longer than, the petiole, bearing a dichotomous cyme of many flowers. Corolla funnel-shaped, spread at the top to the width of a penny-piece; of a very deep rich and glossy rose colour, equally dark within and without. (*Bot. Mag.*, April.)

CCXI. *Scrophularìneæ.*

1775. LINA'RIA § ii. Prostràtæ. [S a.l Sw. fl. gar. 2. s. 235
15789*a* circinàta *D. Don* curve-*lfd.* ♃? ⚹? ♃? ♄? △? ⌴ or ♃ jn.jl Y N. Africa? Buenos Ayres? 1833.

A pretty species, with small revolute leaves, arrow-shaped at the base; and with a good proportion of flowers, whose corollas are " larger than those of L. vulgàris." It is, therefore, among small prostrate plants, a showy one. Mr. Anderson of the Chelsea Botanic Garden has raised the species from exotic seeds. (*The Brit. Flow.-Gard.*, April.)

1783. MI'MULUS. [1. 54. with a figure
Smíthii *Mr.* Smith's ♃ △ or ♃ f.n Y.Spot Eng. hyb. 1832. D p.l Paxton's mag. of bot.

M. Smíthii and *M.* Yoúngii, which bear a very close resemblance to each other, are the most beautiful kinds of *M*ímulus known. *M.* Smíthii is a hybrid, raised probably between the *M.* rivulàris and *M.* variegàtus. It partakes much of the habit of *M.* rivulàris, and produces flowers profusely. (*Paxton's Magazine of Botany*, April.) Mr. Dennis, nurseryman, Chelsea, possesses plants of the *M.* Smíthii.

Scrophularìneæ § 3 *Gratiòleæ.*

1787*a*. ARTANE'MA *D. Don.* (*Artaō*, to append, *nēma*, a filament; a tooth is borne on one side of each of the longer filaments.) 14. 2. Sp. 1.— [Bot. mag. 3104
fimbriàtum *D. Don* fringed-*corollaed* ♃ ⌴ or 3 jn.aut Pa.B Moreton Bay 1830. C p.l
Torènia? scàbra *Grah.*, Loudon's Hort. Brit. No. 29293., Bot. Cab. 1990., Bot. Mag. 3104., Gard. Mag. 9. 707.

We consider it essentially distinguished from Torènia by its deeply-parted calyx, the serrated lobes of its corolla, the structure of its stamens, the form and consistence of its capsule, and, finally, by its large succulent placentæ. — *D. Don.*

Artanèma fimbriàtum will be found, although usually treated as a greenhouse plant, to succeed in the open border during the summer months; freely producing its blossoms and ripening its seeds. It should be planted in a mixture of peat and loam; and is increased by seeds or by cuttings. The plant has a good deal of the aspect of a *M*ímulus; its blossoms are large and showy; and we consider it an interesting addition to the gardens. Mr. Neill of Canonmills, Edinburgh, Messrs. Loddiges, and, doubtless, others, possess the plant. (*The Brit. Flow.-Gard.*, April.)

MONOCOTYLEDONOUS PLANTS.

CCXXXVIII. *Amaryllìdeæ.*

969. AMARY'LLIS 7992 aúlica " seems liable to much variation. We [Dr. Hooker] have represented a splendid variety, in *Bot. Mag.* t. 2983., with green lines in the centre, running nearly the whole length of each petal; with a very obsolete glandular disk; and with long narrow glaucous leaves. Between this variety, and the variety platypétala *Lindley* in Bot. Reg. t. 1038., and the original A. aúlica *Ker* in Bot. Reg. t. 444., our present plant [figured in the *Bot. Mag.* for April, 1834, t. 3311.] seems intermediate. The points in which our plant differs from the A. aúlica *Ker* are, the petals are less sharply acuminate, and the base of the petals is of a darker green. The bulb

was presented to the Glasgow Botanic Garden by —— Pearson, Esq.; who had brought it from the neighbourhood of Rio Janeiro, in Brazil, where it is a native." (*Bot. Mag.*, April.) A. aúlica itself, and all varieties of it, are, when in flower, superb plants.

935. ISMEʹNE 7642 *Amáncaes*
2 sulphùrea *Herb.* sulphureous-*fl'd.* ɣ [Δ] or 3 ... Su Eng. hybrid 1829. O s.p Bot. reg. 1665
It has been originated from a seed of Ismène *Amáncaes* which had been fertilised by the pollen of I. calathìna *Herbert.* [In *Hort. Brit.*, the neuter adjective calathìnum is wrongly associated with Ismène, instead of the feminine calathìna.]

A very ornamental hybrid; and interesting, in evidencing the great change which has been wrought by the impression of the male species. The colour of the flower is intermediate; and the scent, though powerful, is not delightfully fragrant as in calathìna, nor so disagreeable as that of *Amáncaes.* The constitution is vigorous, like that of the former species; from which it also inherits a more robust stature and less attenuated leaves. (*Herbert* in *Bot. Reg.*, April.)

CCXL. *Orchìdeæ.*

2530. CATASEʹTUM.
lùridum *Lindl.* lurid-*fl'd.* £ [Δ] or 1 s.n G.Y.Br Brazil 1832. D r.w.l.potsh Bot. reg. 1667

Although it cannot be compared for beauty with Catasètum tridentàtum, it is, nevertheless, an interesting species. The spots on the lip are of the deepest and richest ruddy brown; while the horns of the column may be compared to the fore legs of some spider, lurking in the bosom of the flower to seize upon the victims that may enter it. Plants of this species are possessed by Messrs. Loddiges, Mr. Knight, Mr. Bateman, and the London Horticultural Society.

CCLI. *Liliàceæ.*

3357. CYCLOBOʹTHRA *Swt.* (*Kyklos*, a circle, *bothros*, a pit; a circular depression, which is nectariferous, in each petal.) 6. 1. Sp. 5.—
lùtea *Lindl.* yellow-*petaled* ɣ Δ or 1½ au.s Y Mexico 1827. O p.l Bot. reg. 1663
C. barbàta *Swt.* in Brit. Flow.-Gard. 1. s. 273., Loudon's Hort. Brit. No. 28170., where the synonyme Fritillària barbàta *Kth.* should, according to what follows, be cancelled.
"When this plant was first introduced, it was supposed to be the same as the Fritillària barbàta published in M. Kunth's account of the plants discovered by Humboldt and Bonpland; but we learn, from the last volume of Römer and Schultes, that that species has a bearded horseshoe mark on its sepals, no trace of which can be found in the plant now figured. We are, therefore, unwillingly obliged to amend the name by which this has hitherto been known: a name which would be untenable even if Fritillària barbàta were the same plant, because it [expressive of the bearded inward face of the petals] is equally applicable to every species of the genus. (*Bot. Reg.*, April.)
Cyclobóthra álba and pulchélla, described in our last, in p. 179., are figured in the *Bot. Reg.* for April; C. pulchélla *Bot. Reg.* 1662.; C. álba *Bot. Reg.* 1661. In *Bot. Reg.* 1662., a synopsis of the known species of the genus is supplied, which are shown to be nine in number; but only four, or at most five, of these have been yet introduced (alive) into Britain.

CCLVI. *Aröìdeæ.*

2672. *CALAʹDIUM.* [Bot. mag. 3314
23489a fragrantìssimum *Hook.* most fragrant £ L ☐ 4? fra ja Crea.R Demerara 1832? C s.p

Introduced from Demerara, to the Liverpool Botanic Garden, by C. S Parker, Esq. It is a species with an extending rooting stem; petiole 2 ft. or more long; expansion of the leaf 1½ ft. to 2 ft. long, oblongo-cordate. Spathe almost 9 in. long, cream-coloured, in its lower part richly tinged with red. "The whole inflorescence yields a fragrance, which I [Dr. Hooker] can only compare with that of the Oʹlea fràgrans, but far more powerful." (*Bot. Mag.*, April.)

Art. V. *Retrospective Criticism.*

Correction.—In "hedges of yew are of low growth," in p. 185., lines 14. and 15., for "low" read "slow."

Decandolle's Theory of the Rotation of Crops.—In the February Number of the Gardener's Magazine is an article entitled an "Investigation of the theory of the rotation of crops; by the author of the *Domestic Gardener's Manual;*" a very interesting subject to the gardener and vegetable physiologist. The writer seems to claim at least a share of priority in the discovery of what is termed "De Candolle's theory;" assuming that trees and plants emit excrementitious matter into the soil, hurtful to some and favourable to the growth of other plants. In the progress of scientific knowledge, it is not at all uncommon to find different men simultaneously discovering the same physical facts; and we are not sure but Mr. Shirreff of Mungoswells, East Lothian, a scientific farmer, might also claim kindred with this popular bantling; for it is several years since he recorded the same opinions, in an essay on "The gregarious nature of grasses." [See *Quart. Jour. of Agric.*, vol. ii. p. 242.] Gardeners, of all others, have an excellent opportunity of investigating this theory; and we recommend this and similar articles to their serious attention. (*G.* in the *Dundee, Perth, and Cupar Advertiser*, March 14. 1834.)

Directions for dissolving Indian Rubber by Means of Pyroligneous Ether. [IX. 243.]—When a work is put forth in the style which distinguishes the *Encyclopædia of Gardening*, it is but reasonable to expect correctness at least in the information it professes to afford, beyond all other publications. A specimen of that correctness may be found in the Number for April, 1833, which contains directions for dissolving Indian rubber by means of pyroligneous ether. Had you known any thing of the matter, you must be aware that "pyroligneous ether" will not act upon caoutchouc in any way. What was the solvent you might intend under that name is not to be divined.—*Anon.* with the Hereford postmark, Feb. 17. 1834.

[We sent this letter to Mr. Mallet, and have received the following reply.]

I have returned the anonymous note which you sent me. Although addressed to you, I am alone responsible for the charge which it contains. This note is full of mistakes. The writer first mistakes you, the conductor of the Magazine, for the author of my notice respecting the solution of Indian rubber; secondly, he mistakes the *Encyclopædia of Gardening* for the *Gardener's Magazine;* thirdly, he mistakes the number in which the article in question occurs; and, lastly, he mistakes in the general assertion of his note, viz. "that pyroligneous ether will not act upon Indian rubber in any way." As this is a simple assertion of fact, it does not admit of argument; I, therefore, only say, *if* the author of the note remains incredulous on the subject, and will venture to come forward, I will send you some of the solution for his inspection. A word or two more may possibly enlighten him as to the origin of his mistake. The fluid to which the name of pyroligneous ether is applied, differs much in its properties, as obtained from different manufactories: some of it will dissolve Indian rubber, and some of it will not. For the truth of this he may have the authority of Berzelius:—"Les contradictions que présentent ces données sur des expériences aussi simples, paroissent indiquer qu'il existe plusieurs espèces d'esprits pyroligneux qui ont de l'analogie sous certains rapports, mais diffèrent les uns des autres par quelques-unes de leurs propriétés." (*Traité*, &c., tom. vi. p. 674.) I confess myself to blame in not having noticed this in my former observations upon this menstruum. However, since I made that communication, I have found that there is no solvent of Indian rubber so good for gardening and most other purposes, as refined coal tar, sold under that name by drug merchants, which is only common coal tar deprived of water by boiling.—*Robert Mallet.* 24. *Capel Street, Dublin, March* 19. 1834.

Mr. Munro's Suggestion (p. 551.) *for the Formation of a Sylvan Society* I am much pleased with, and I agree with him in almost all he says on the subject. I seldom pass by other people's woods or plantations but my fingers itch to thin, and weed, and prune out. In short, as Mr. Munro has truly said, "the greater proportion of our woods, from neglect or mismanagement, look as if they belonged to nobody."—*W. T. Bree. Allesley Rectory, near Coventry, Warwickshire, Oct.* 19. 1833.

The Oak Trees which turn away their Heads from the South-west (p. 548.), described by Mr. Clarke, are by no means peculiar to his part of the country [Poole, Dorsetshire]. Years ago, I was much struck with the same thing in the Isle of Wight, and have often said, that, were I ignorant of the points of the compass, I could immediately discover them by looking at an oak tree. Even in Warwickshire, in exposed situations, the oak trees show their aversion to the south-west, by turning away their heads from that quarter.—*Id.*

Art. VI. *Queries and Answers.*

Training the Branches of Espalier Trees downwards. — I shall feel obliged to any of your readers for their opinions on the following suggestion, as to planting standard apple and pear trees behind espaliers, and training the branches down over the front. Would it have the effect of increasing the fruitfulness of the trees by the inclination of the branches downwards? — *Jas. Mitchinson. Pendarves, March* 20. 1834.

Training Trees on Trelliswork arched over the principal Walks of a Garden. — Would it not be making the most of a garden, to have trees trained to trelliswork over the middle and cross walks? Suppose standards were planted, their branches might be trained over to the side opposite to that of the stem and roots, which would give an inclination downwards, the real effect of which I should be glad to be informed of? Would not iron bars, an inch square, fixed in stones, and placed at proper distances, with cross-bars from one upright to another, as stiffeners, and small rods of a quarter of an inch in diameter, put through holes at about 8 in. distance, make a very light and cheap trellis for this purpose? It would also be very durable, if kept well painted. — *Id.*

The Wyken Pippin Apple. — I think I have heard that this favourite apple was raised from seed in the neighbourhood of Coventry, and that every cottage garden in that part of Warwickshire has a tree or two of it growing in it. Can any of your readers tell me if this is correct, and where the parent tree is to be found? The tempestuous wind at the beginning of last September blew down the finest old apple tree in this nursery; the stem of which measured more than 5 ft. in girth; its branches extending many yards. We suppose this tree to have been about eighty years old; it was a Wyken pippin; and plants from it were easily distinguished by their peculiarly upright growth when the trees were young, and by the flatness and spotted yellow skin, with a rich aromatic flavour, of the fruit, when it was ripe. — *T. Rivers, jun. Sawbridgeworth Nursery, Feb.* 1834.

[In the second volume of this Magazine (p. 486.) our correspondent will find all the particulars of which he desires to be informed.]

Packing Grapes. (p. 84.) — The following is the mode of packing grapes which I adopted with success for many years, having to send them nearly three hundred miles. A box having been prepared, a bed of clean wool, well separated, was laid in the bottom, on which a layer of grapes was placed; each bunch being separately enveloped in tissue paper. A portion of wool was then introduced between each bunch, and all the interstices filled up with it, and then a layer of wool put over the top. For a second layer, a small ledge of wood was fixed at each end in the box at the level wanted, and a thin board made to fit in easily, so as to fall down upon the ledges; in the board there were two finger-holes made with an inch centre-bit; and the board, being fixed down upon the ledges, with a couple of small brads at each end, driven in half-way, a second layer of grapes was laid in as above, and so on for a third layer, if wanted. I think Mr. Wilson will find the above method of fixing in the separation board an improvement upon his mode; at least I preferred it, after trying both ways. The finger-holes I also found very convenient for getting out the board, after drawing the small brads with a pair of pincers. In cases where wool is an object, or may be thought too expensive, moss well dried, cleaned, and thrashed, will be found a tolerably good substitute; but the superior elasticity of the wool renders it preferable. — *T. Rutger. Shortgrove, Feb.* 1834.

The Cornish Hollick. — There is an *A*'llium grown in some of the cottagers' gardens in Cornwall, which is commonly called there hollock, or hollick, and the tops of which are used by the common people for making pies. I should be glad to know its botanical name; also the botanical name that is attached to the variety of *A*'llium Cèpa, called the potato onion. — *T. Rutger. Shortgrove, Jan.* 1834. [As to the latter, *A.* Cèpa var. aggregàtum.]

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most select trees. It is a perfect gem of botanical beauty in the foreground, heightened in effect by interesting gleams of distant scenery, seen between and over fine oaks and elms, on the lower part of the declivity.

In order to give our readers a correct idea of the details of this garden, so exceedingly rich in choice plants, we applied to Mr. Garnier for a ground plan; and he has obligingly had one prepared for us, of which *fig.* 11. is an engraving. He has also sent us a small view of the vicarage house. (*fig.* 10.) The following are the details of the plan: —

1. *R*hododéndron máximum, new. 2. Pink-flowering thorn. 3. Bed of a variety of choice roses. 4. Bed of pinks in summer, China asters in autumn. 5. Córnus flórida. 6. *R*hododéndron, a new variety. 7. *R*hododéndron catawbiénse. 8. Small bed of *V*erbèna *c*hamædrifòlia. 9. Large azalea.

10. *A*'rbutus. 11. Portugal laurel. 12. Laurustinus. 13. Bed of heartseases. 14. Variegated rhododendron. 15. *R*hododéndron daùricum àtro-vìrens. 16. Large narrow-leafed bay. 17. *R*hododéndron pónticum. 18. Two superb elms. 19. Bed of a variety of herbaceous plants.

20. Azàlea *l*edifòlia (índica álba). 21. Round bed of herbaceous plants. 22. *R*hododéndron pónticum. 23. Rhododendron, hybrid. 24. Rhododendron, hybrid. 25. Oval bed of pelargoniums, stocks, and sorts of *R*òsa odoràta. 26. Laurustinus. 27. *R*hododéndron *r*òseum. 28. Kálm*ia* latifòlia. 29. Clump of American plants.

30. Hùme*a* élegans. 31. Oval bed of choice herbaceous plants. 32. Large *R*hododéndron arbòreum. 33. *Pæònia Moútan*. 34. *R*hododéndron álta-clerénse. 35. Magnòl*ia* grandiflòra, 26 ft. square.

Growing under veranda: — 36. Camélli*a* japónica *m*yrtifòlia. Camélli*a* striped, orange-leafed myrtle, and citron. 37. Magnificent broad leafed myrtle. 38. Camélli*a* japónica atrórubens. 39. Camélli*a* japónica, double white. 40. Camélli*a* japónica *Pompònia*. 41. Camélli*a* japónica *pæoniæflòra*, and double striped; and stand of pelargoniums.

42. Magnòl*ia* grandiflòra. 43. *R*òsa Bánks*iæ*. 44. Magnòl*ia* purpùrea. 45. *J*asmìnum revolùtum. 46. Magnòl*ia* grandiflòra, 30 ft. high. 47. Noisette rose. 48. Long bank of the choicest American plants, chiefly consisting of the new hybrid rhododendrons; and including all the new varieties of Azàlea índica. 49. *V*ibúrnum lùcidum.

50. *Aúcuba* japónica. 51. Vase containing pelargoniums, blue lobelias, and Lophospérmum erubéscens. 52. *R*hododéndron catawbiénse, variety. 53. Standard Magnòl*ia* grandiflòra. 54. Vase, containing scarlet pelargoniums and Maurándy*a* Barclay*àna*. 55. Standard Camélli*a* japónica. 56. Azalea rhododendron, hybrid. 57. Magnòl*ia* purpùrea. 58. Vase, containing pelargoniums, and *V*erbèna *c*hamædrifòlia. 59. Very large elm, with seats.

60. *R*hododéndron arbòreum. 61. Vase of scarlet pelargoniums, and pink Maurándy*a* [? semperflòrens]. 62. *F*ìcus elástica. 63. Red cedar. Juníperus virginiàna. 64. Bed of pinks in summer, China asters in autumn. 65. *Aúcuba* japónica. 66. *N*èrium plènum [? *N.* Oleánder var. spléndens]. 67. Round bed of scarlet and white varieties of georgina. 68. Oval bed of herbaceous plants. 69. Fúchs*ia* grácilis.

70. Chionánthus [?] fúlgida. 71. *Bérberis* diversifòlia. 72. *Yúcca* gloriòsa. 73. Oval bed of *R*òsa odoràta and of Calvert's Noisette roses. 74. *P*ìnus Webb*iàna*. 75. Oval bed of tree and dwarf roses. 76. Azàlea índica álba. 77. Large standard single-flowered camellia. 78. Oval bed of varieties of hybrid rhododendrons and azaleas. 79. *R*hododéndron arbòreum.

80. Large mass of rhododendrons. 81. Round bed of choice azaleas. 82. *R*hododéndron magnol*iæfòlium*. 83. Azàlea nudiflòra coccìnea. 84. Bed of varieties of georginas. 85. *L*igústrum lùcidum. 86. Kálm*ia* latifòlia. 87. Aristotèl*ia Mácqui*, new variety. 88. Bed of hydrangeas. 89. *Araucària* imbricàta.

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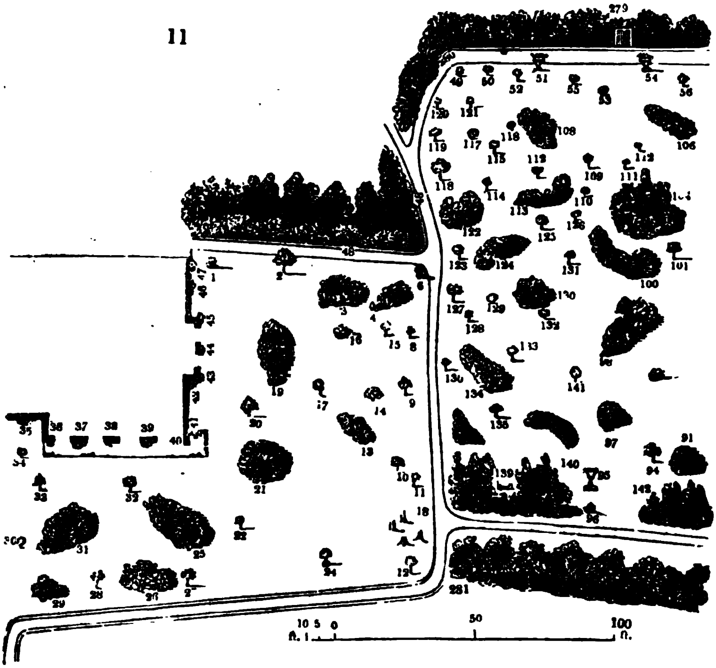


90. Clump of rhododendrons. 91. Round bed of georginas. 92. Edwárds*ia* grandiflòra. 93. Three fine elms in a group. 94. Photínia serrulàta. 95. Large vase. 96. *R*hododéndron microphýllum. 97. Very large rhododendron. 98. Oval bed of choice herbaceous plants. 99. A very large spreading oak tree, with seats.

100. Bed of choice herbaceous plants. 101. Magnòl*ia* auriculàta. 102. Malachodéndron ovàtum. 103. Magnòl*ia* glaúca. 104. Very large clump of rhododendrons. 105. Cotoneáster microphýlla. 106. Bed of sorts of Chinese chrysanthemums. 107. Rhododendron azalea, hybrid. 108. Bed of twelve of Calvert's new varieties of *R*òsa odoràta and standard perpetuals. 109. Gordòn*ia* pubéscens.

110. Dracæ`na austràlis. 111. Standard *C*ydònia japónica. 112. Azalea. 113. Bed of choice azaleas. 114. Magnòl*ia* citriodòra. 115. *Pæònia Moútan r*òsea. 116. *P*ýrus spectábilis, large. 117. Edwárds*ia* grandiflòra. 118. Large arbutus. 119. *D*áphne póntica.

120. Chimonánthus fràgrans. 121. Large *R*hododéndron catawbiénse. 122. Large rhododendron and large bay tree. 123. Kálm*ia* latifòlia. 124. Oval bed of choice herbaceous plants. 125. Magnòl*ia* conspícua. 126. Magnòl*ia* cordàta. 127. Round bed of Lobèl*ia* fúlgens and of double tuberoses. 128. Magnòl*ia* máxima. 129. Eriobótrya japónica.

130. Round bed of tree and dwarf roses. 131. Magnòl*ia* Thompson*iàna*. 132. Magnòl*ia* purpùrea. 133. Magnòl*ia* macrophýlla. 134. Oval bed of dwarf georginas. 135. *A*'rbutus procèra. 136. Magnòl*ia* acuminàta. 137. Clump of rhododendrons. 138. Bed of pelargoniums, border of German stocks. 139. Covered seat made with reeds.

140. Fúchs*ia* microphýlla. 141. *R*hododéndron Smíth*ii*. 142. Clump of evergreens and rhododendrons. 143. Oval bed of choice azaleas. 144. Round bed of camellias. 145. *Pæònia Moútan p*apaveràcea. 146. Bed of rhododendrons. 147. *Yúcca* glorìosa. 148. Horse-chestnut, with a seat. 149. Deciduous cypress.

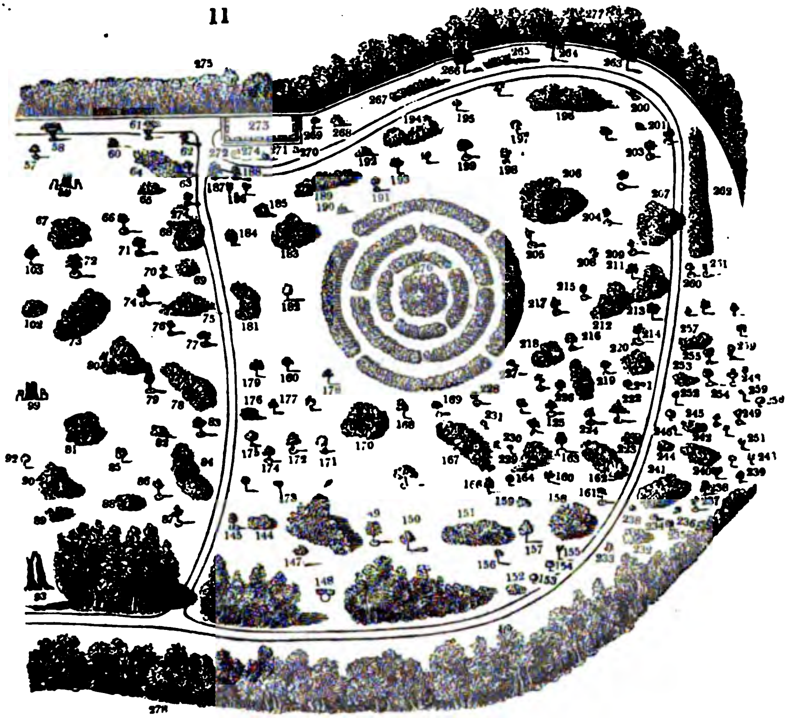
150. Myrtle. 151. Oval bed of herbaceous varieties of *Pæònia*. 152. Portugal laurel. 153. Kálm*ia* latifòlia. 154. *R*hododéndron máximum, new variety. 155. Azàlea índica álba. 156. *C*upréssus lusitánica. 157. Magnòl*ia* glaúca. 158. Round bed of azaleas. 159. Weeping willow.

160. *Bérberis* fasciculària. 161. Osmúnd*a* regàlis. 162. Oval bed of herbaceous plants. 163. *P*ìnus occidentàlis. 164. Oval bed of Calvert's Noisettes. 165. *R*hododéndron arbòreum máximum. 166. *R*hododéndron *r*òseum. 167. Oval bed of herbaceous plants. 168. Aristotèl*ia Mácqui*. 169. Magnòl*ia* purpùrea.

170. Bed for georginas. 171. *Araucària* brasiliàna. 172. Dracæ`na ovàta. 173. Cedar of Lebanon. 174. Magnòl*ia* glaúca. 175. *V*accínium uliginòsum. 176. *R*hododéndron máximum, old variety. 177. Kálm*ia* latifòlia. 178. Single red camellia, 5 ft. high. 179. *R*hododéndron álta-cleréns*e*.

180. Magnòl*ia* tripètala. 181. Oval bed of *C*ydònia japónica, red and white. 182. Large azalea.

11



183. Round bed of georginas. 184. Magnòl*ia* Thompson*iàna*. 185. Round bed of *V*erbèna chamædrifòlia and of Thunbérg*ia* alàta. 186. *Rìbes* sanguineum. 187. *R*hododéndron pónticum. 188. Rhododendron. 189. Oval bed of azaleas.

190. Bed of *V*erbèna venòsa. 191. *Sophòra* japónica péndula. 192. *Æ*'sculus rubicúnda (*r*òsea *Bot. Reg.*). 193. Robín*ia* híspida arbòrea. 194. Bed of herbaceous plants. 195. Chionánthus marítima. 196. Oval clump of rhododendrons. 197. *A*'rbutus longifòlia. 198. *Cra*tæ`gus *Azaròlus*. 199. *R*hododéndron catawbiénse.

200. Myrtle. 201. Large yellow azalea. 202. Variegated holly. 203. Broussonèt*ia* papyrífera. 204. Chionánthus virgínica. 205. *J*uníperus bermudiàna. 206. Round bed of azaleas. 207. Large American bed. 208. Late-flowering azalea. 209. Magnòl*ia* auriculàta.

210. Oval bed of varieties of Lobèl*ia*. 211. *Sophòra* japónica. 212. Oval bed for flowers. 213. *E*rìca arbòrea. 214. Rhododendron, new variety. 215. Rhododendron. 216. Raphiólepis índica. 217. *I*'lex myrtifòlia. 218. Bed of anemone-flowered georginas. 219. Cunninghàm*ia* lanceolàta.

220. Round bed of varieties of pelargoniums. 221. *D*iospȳrus *L*òtus. 222. Gledítsch*ia* hórrida. 223. *R*hododéndron máximum, new variety. 224. Large Kálm*ia* latifòlia. 225. *P*rìnos nepalénsis. 226. *Catálpa syringæ*fòlia. 227. *R*hámnus latifòlius. 228. Chinese arbor-vitæ, *T*hùja orientàlis. 229. *Bérberis* fasciculària.

230. Large Magnòl*ia* tripétala. 231. *C*upréssus péndula [? Schubért*ia* dísticha péndula]. 232. Round bed of lily of the valley. 233. Myrtle. 234. Hydrangea. 235. Rhododendron, new variety. 236. Arbutus. 237. Bed of Scotch roses. 238. Rhododendron. 239. Schinus.

240. Holly. 241. Oval bed of American plants. 242. Bed of dark China rose. 243. *L*èdum latifòlium. 244. Rhododendron. 245. Round bed of sorts of *E*rìca. 246. Eugenia. 247. Rhododendron. 248. Rhododendron, a new variety. 249. Davaû*a* denticulàta.

250. *Yúcca* gloriòsa. 251. Variegated rhododendron. 252. Pàv*ia* díscolor. 253. Round clump of American plants. 254. Magnòl*ia* cordàta. 255. *U*'lex stricta. 256. *A*'rbutus speciòsa. 257. Oval bed of China roses. 258. Azalea. 259. Rhododendron.

260. Seedling rhododendron. 261. Ammȳrsine *b*uxifòlia. 262. Large bed of rhododendrons. 263. Dark *Rìbes* sanguíneum. 264. Virgíl*ia* lùtea. 265. Dwarf hollyhocks. 266. *Pȳ*rus nepalénsis. 267. Bed of hollyhocks. 268. Round bed of Lobèl*ia* speciòsa, &c. 269. Laburnum.

270. Rhododendron, in varieties. 271. Bed of double tulips in spring, and scarlet pelargoniums in summer. 272. Bed of single tulips in spring, and of heliotropes in summer. 273. Conservatory. 274. *C*ȳtisus purpùreus. 275. The wall, covered with a collection of choice plants. [See p. 129.] 276. The inner circle, occupied by tree roses and dwarf georginas; the two next circles, different sorts of dwarf roses; outer circle, collection of herbaceous plants of the brightest colours. 277. Fence of evergreens. 278. Shrubbery of evergreens and large trees. 279. Entrance to kitchen-garden, with trellis. 280. Covered seat of wood. 281. Undulating ground, with large trees.

The first thing we saw, on entering Mr. Garnier's grounds, was a Magnòl*ia* grandiflòra against the house, 27 ft. high and about 25 ft. wide, which was transplanted in the month of August, when in flower, 12 years ago, without sustaining the least injury; the reason being, that every root and fibre was preserved, and the latter not exposed to the air for more than five minutes. There are other magnolias against the house, equally high. The wall, against which are trained so many fine plants, has been built about six years, and is about 10 ft. high, with a coping projecting about nine inches, and a copper trough to collect the rain which falls on it; the latter is found to be a great protection to the roots of the shrubs, and to the herbaceous plants below. Among the plants on the wall, the more uncommon are several of the New Holland species, of the genera *A*càcia, Metrosidèros, Eucalýptus, Melaleùca, &c.

The herbaceous plants, at the base of the wall, are several Amaryllí*deæ*; ixias, and other *I*rídeæ; and a good collection of mesembryanthemums. Among the plants on the lawn are groups of camellias, which stand the winter without any protection, the loquat, myrtles, tree rhododendrons, araucarias; *A*bies Webb*iàna*, and other rare species; all the magnolias, including máxima, and that variety of conspícua which is named citriodòra; the former has flowered, but it dropped without the colour having been ascertained. We must, from necessity, pass over the names of a great number of other valuable plants, as well on the lawn as on the wall, and conclude by noticing a very neat span-roofed conservatory, designed by Mr. Page, and placed on a plinth of three steps, which forms a termination to the terrace walk. The outer border of this walk is ornamented with vases, placed at regular distances.

Among the general principles which regulate Mr. Garnier's management, we shall mention three of preeminent importance: first, he arranges all his flowers and shrubs in masses of one kind, even to the varieties of Georgì*na*, by which he produces brilliant masses of the same colour; secondly, all his groups and masses are of plain forms, such as circles, ovals, squares, and parallelograms, in the genuine English manner, adopted by Mason in the flower-garden at Nuneham Courtenay, and by the late Major Price, in the flower-garden at Mongewell; thirdly, he transplants the azaleas, rhododendrons, and other American shrubs every year, and at any season of the year, so as to keep every individual plant detached from the rest, though close to them (we saw some beds of azaleas and rhododendrons, which had just been removed, looking perfectly well, notwithstanding the extraordinary dryness of the season); and, fourthly, his great secret in acclimatising, or, in other words, in enabling tender plants to stand the winter in the open air, is to have a perfectly

Art. VII. *Covent Garden Market.*

	From			To		
The Cabbage Tribe.	£	s.	d.	£	s.	d.
Cabbage, per dozen:						
White - - -	0	0	9	0	1	9
Plants or Coleworts -	0	2	6	0	4	0
Broccoli, per bunch:						
White - - -	0	1	6	0	3	6
Purple - - -	0	1	0	0	2	0
Legumes.						
Peas, forced, per punnet -	0	10	0	1	0	0
Kidneybeans, forced, p. hund.	0	1	6	0	2	0
Tubers and Roots.						
Potatoes - per ton	5	0	0	0	0	0
Potatoes - per cwt.	0	5	0	0	0	0
Potatoes - per bushel	0	2	6	0	0	0
Kidney, per bushel - -	0	5	0	0	0	0
Scotch, per bushel -	0	3	0	0	0	0
New, per pound - -	0	2	0	0	2	6
Jerusalem Artichokes, per half sieve - - -	0	1	0	0	1	6
Turnips, White, per bunch	0	0	1	0	0	2
Carrots, per bunch:						
Old - - - -	0	0	4	0	0	6
Young - - -	0	0	6	0	0	8
Horn - - - -	0	1	0	0	1	6
Parsneps, per dozen - -	0	0	9	0	1	0
Red Beet, per dozen -	0	1	0	0	1	6
Skirret, per bunch - -	0	1	6	0	0	0
Scorzonera, per bundle -	0	1	0	0	1	6
Salsify, per bunch - -	0	1	0	0	1	6
Horseradish, per bundle -	0	2	0	0	5	0
Radishes:						
Red, per dozen hands (24 to 30 each) - -	0	0	6	0	0	9
Red Turnip, per bunch -	0	0	2	0	0	0
White Turnip, per bunch	0	0	1½	0	0	2
The Spinach Tribe.						
Spinach per sieve -	0	1	6	0	2	0
Spinach per half sieve -	0	1	0	0	0	0
Sorrel, per half sieve - -	0	1	0	0	1	3
The Onion Tribe.						
Onions:						
Old, per bushel - -	0	5	0	0	9	0
For pickling, per half sieve	0	4	0	0	5	0
Ciboules, green, per bunch	0	0	2	0	0	3
Leeks, per dozen bunches -	0	0	9	0	1	3
Chives, per dozen roots -	0	1	6	0	0	0
Garlic, per pound - -	0	0	6	0	0	8
Shallots, per pound - -	0	1	0	0	1	6
Asparaginous Plants, Salads, &c.						
Asparagus, per 100 - -	0	10	0	0	15	0
Middling - -	0	6	0	0	8	0
Small - - -	0	2	6	0	4	0
Small, per half sieve -	0	5	0	0	8	0
Sea-kale, per punnet -	0	1	6	0	2	6
Lettuce, per score:						
Cos - - -	0	1	6	0	2	0
Cabbage - - -	0	0	3	0	0	6

	From			To		
	£	s.	d.	£	s.	d.
Endive, per score - -	0	1	6	0	2	0
Celery, per bundle (12 to 15)	0	0	4	0	1	0
Small Salads per half sieve	0	1	6	0	2	0
Small Salads per punnet -	0	0	2	0	0	3
Watercress, per dozen small bunches - -	0	0	4	0	0	6
Pot and Sweet Herbs.						
Tarragon, per dozen bunches	0	6	0	0	0	0
Dried - - -	0	3	0	0	0	0
Fennel, per dozen bunches	0	2	0	0	0	0
Thyme, per dozen bunches	0	2	0	0	0	0
Sage, per dozen bunches -	0	2	0	0	0	0
Mint, per dozen bunches -	0	4	0	0	0	0
Dried - - -	0	1	0	0	0	0
Peppermint, dried, per dozen bunches - -	0	1	0	0	0	0
Marjoram, dried, per dozen bunches - - -	0	1	0	0	0	0
Savory, dried, per doz. bun.	0	1	0	0	0	0
Basil, dried, per doz. bunches	0	1	3	0	0	0
Rosemary, green, per dozen bunches - - -	0	5	0	0	0	0
Lavender, dried, per doz. bun.	0	3	0	0	0	0
Tansy, dried, per doz. bunches	0	1	0	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Rhubarb Stalks, per bundle	0	0	9	0	1	6
Edible Fungi and Fuci.						
Mushrooms, per pottle -	0	0	9	0	1	0
Morels, per pound - -	0	14	0	1	0	0
Truffles, per pound:						
English - -	0	14	0	0	0	0
Foreign, dried - -	0	14	0	0	0	0
Fruits.						
Apples, Dessert, per bushel:						
Nonpareils - -	1	10	0	2	10	0
Gazettes - - -	0	12	0	0	14	0
American - -	0	15	0	1	10	0
French - - -	0	5	0	0	6	0
Sourings - - -	0	6	0	0	7	0
French Crabs - -	0	7	0	0	8	0
Almonds, per peck - -	0	7	0	0	8	0
Strawberries, forced, per oz.	0	1	6	0	2	6
Pine-apples, per pound -	0	5	0	0	14	0
Grapes, per pound:						
Hot-house - -	0	10	0	1	10	0
White Portugal - -	0	0	8	0	1	0
Purple Portugal - -	0	1	0	0	1	6
Cucumbers, frame, per brace	0	2	0	0	5	0
Oranges per dozen -	0	0	9	0	2	6
Oranges per hundred -	0	4	0	0	18	0
Bitter Oranges, per hundred	0	6	0	1	4	0
Lemons per dozen - -	0	0	9	0	2	0
Lemons per hundred -	0	4	0	0	14	0
Sweet Almonds, per pound	0	2	0	0	2	3
Brazil Nuts, per bushel -	0	14	0	0	16	0
Spanish Nuts, per peck -	0	4	0	0	0	0
Barcelona Nuts, per peck -	0	5	0	0	0	0

Observations.—The market has been better supplied with the articles usual at this season, than could have been expected from the prevalence of cold wind and severe frosts at night, during the present month (up to this date); but a comparison of prices will at once show that a deficiency in supply does and must necessarily continue to exist for some time to come. Of early spring cabbages we have had a tolerable quantity, at fair prices, offering an inducement to the growers to send them to market prematurely, which will be the cause of a deficiency in the ensuing month. The price of coleworts has increased during the last fortnight materially. Of asparagus the supply of forced begins to diminish very perceptibly, and, as the natural has not yet come to hand in any quantity, the price of it is considerably higher. Forced sea-kale is also almost exhausted, and the natural is realising a better price than it did some time since. Spinach comes to hand plentifully, at a reasonable charge.

Broccoli is furnished in very limited quantities, bringing excellent prices. The stock of old onions is getting very short, and, from the prevalence of cold weather, rather in demand: within the last month they have doubled in value. Old carrots are getting scarce, and as we have no supply of young or new, and cannot expect any quantity for some time to come, they will undoubtedly be much dearer. Of potatoes we still have abundance, of excellent quality, from all parts; but the supply to the metropolis is now so generally furnished direct from the Thames, that we have little to do in them until the new are furnished in June or July, when this market usually leads in that article, for price, quantity, and variety. During the last month we have had two or three cargoes of Dutch apples, which have kept us in tolerable supply; but for this, our stock would have been extremely low: at present it does not exceed a few hundred bushels per week. Of American apples there are yet some few in hand, of good quality, but, of course, high in price. Strawberries begin to be furnished regularly, and, since the introduction of the new varieties, of good size and quality. Some few pines have also been sent, realising a fair remunerating price; nevertheless, they are not at all abundant. Forced grapes are also in moderate supply, but not much in demand, as the prices will plainly indicate. Of peas we have had a few small parcels (forced), but at present they are not much in demand. — *April* 15. 1834.

Art. VIII. *London Horticultural Society and Garden.*

March 8. 1834. — *Read.* Hints concerning the culture of Melons (particularly those of the Hoosainee varieties of the Persian families) as aquatic or amphibious plants; by G. J. Towers, Esq.

Exhibited. *R*hododéndron arbòreum, from Sir C. Lemon, Bart. *A*nemòne horténsis supérba, and four other varieties; from Mr. James Young, Epsom. Phaíus grandiflòrus, from Mr. G. Mills. Camèll*ia* reticulàta, and japónica Colvíll*i*, from Messrs. Chandler. Cockscomb cauliflower, from Col. Hallen; communicated by T. Hoblyn, Esq. [the seeds of this remarkable variety had been received from Italy.]

Also, from the Garden of the Society. Camellias, narcissuses, Prímula verticillàta, Cássia lævigàta, *Bérberis* *A*quifòlium and fasciculàris, three sorts of *Ribes*, E'ria stellàta, *E*uphórb*ia* bilàbris, Echevèr*ia* gibbiflòra, &c.; also fourteen sorts of apples.

Distributed. Scions, from the Society's garden, of the Brabant bellefleur, Gravenstein, Pennington seedling, and Boston russet sorts of apples; and of the Beurré d'Aremberg and Forme de délices sorts of pears.

Price of Tickets of Admission to the ensuing (see p. 189.) *Exhibitions at the Society's Garden.* It was announced, that the price of the tickets would, after April 1., be 5*s.* each: their original price was 3*s.* 6*d.* each.

April 1. — *Read.* Meteorological Journal for the year 1833, kept in the Society's Garden.

Exhibited. A seedling heartsease, from Mr. T. Thompson, gardener to Lady Gambier, Iver, Bucks. A species of Kennèd*ya*, native of New Holland, from Boyd Miller, Esq. A seedling auricula, from Mr. Wilmer, Sunbury; and ornamental species of green-house plants, from Mr. Glenny and Mrs. Marryatt.

Also, from the Garden of the Society. Lachnæ'a eriocéphala, Gompholòbium polymórphum, Chorózema Henchmánn*i*, Gésner*a* Douglàs*ii*, Indigófera speciòsa, Ornithógalum arábicum, *Ribes* aúreum præ'cox, and several other well-known interesting plants.

Scions, from the Society's garden, for distribution, were provided of the following varieties of apples: —Red Astrachan, Brickley seedling, Reinette du Canada, Pearson's plate, and Gloria mundi; and of the Fondante d'Automne kind of pear.

THE

GARDENER'S MAGAZINE,

JUNE, 1834.

ORIGINAL COMMUNICATIONS.

Art. I. *Notes on Gardens and Country Seats, visited, from July 27. to September 16., during a Tour through Part of Middlesex, Berkshire, Buckinghamshire, Oxfordshire, Wiltshire, Dorsetshire, Hampshire, Sussex, and Kent.* By the Conductor.

(*Continued from* p. 194.)

Highclere, the Earl of Caernarvon. — *Aug.* 14. Whoever has noticed our remarks on the subject of situation, called forth by Bear Wood (IX. 679.), and by Caversham Park (X. 1.), will readily conceive that we were delighted with the natural features of Highclere. Perhaps, taking the latter altogether, we may venture to call it one of the finest places, as far as ground and wood are concerned, that we have ever beheld.

"Highclere is situated just at the point where the chalk downs (extending northwards, from the village of Kingsworthy on the south of Winchester, to Highclere, a distance of above twenty miles) are suddenly interrupted; their northern escarpment forming two remarkably bold hills, which are the distinguishing features of the place, and conspicuous landmarks to the surrounding country. One of these, called Sidon Hill, is very beautifully wooded: it constitutes the southern extremity of the park at Highclere; and, commencing about half a mile to the south of the mansion, it rises about 400 ft. above the valley which lies below it, and 948 ft. above the level of the sea. The other, called Beacon Hill, is an outlier to the chalk, and is exactly 900 ft. above the level of the sea: it is entirely devoid of wood, and its remarkably square and obtuse outline, and abrupt termination, together with its smooth surface, form a striking contrast to the rich woods of Sidon Hill. These hills are separated, by a valley of moderate depth, from the plateau of chalk on which the mansion stands. The chalk terminates about a quarter of a mile from the house; and the remainder of the park, and the adjacent woods, extending between two and three miles to the north, are entirely upon diluvial clay, gravel, and sand, in endless interchange. There are two large pieces of water: one of these, called Milford, covers between twenty and thirty acres of ground; it is nearly surrounded with natural wood, in part of which, on a steep slope, are some very large beech trees. The other lake is called Dursmere, and, though not so much varied in its contour as Milford, is yet surrounded by beautiful scenery."

In proceeding from Newbury to Highclere, the road passes through a richly cultivated country, having in some places a parklike character. In one part, the effect of the trees and turf, on both sides of the road, lead the traveller to believe that he is passing through a park. Advancing a little, we come to a mansion intended for Gothic; and we cannot help feeling regret that a builder of so little taste should have been at work in such a scene. The road continues in rather a grand style for a cross country road, passing a curious corner clump of larch trees, which, we were informed, constitute the remains of a nursery, and which are now 50 ft. high: these trees, small and naked in the stem, look like a gigantic crop of oats, rather than larches; and present a striking example of how much the character of a tree may be changed by the circumstances in which it is grown. Shortly beyond these larches, and apparently forming the termination of a straight line of the road, appears the archway, which is the main entrance into the park of Highclere. The general effect is exceedingly good; but the architectural details are objectionable, pilasters being used, not at the angles as supports, but in the middle of the wall as ornaments. After passing the arch, we find that the first part of the approach road leads through a thick wood of oaks, hollies, and beeches; as we advance, the eye penetrates to a deep and wild glen on the right; shortly after, the scenery opens to the day, and a sequestered glade, of three or four acres, surrounded by wood, appears to the left: advancing onwards, the wood thickens, and gradually approaches close to the road on the left, while the scenery opens to the right; and, the road making a gentle turn, the upper part of a circular temple, surrounded by a colonnade, and surmounted by a dome, appears on a knoll at a short distance across a woody vale. The road advancing among park scenery, in which exotic trees, such as hoary-leaved limes, cedars, &c., begin to be introduced, we see the same temple crowning the summit of a bold promontory, to which we gradually ascend. The effect of this temple is exceedingly good, not only from the approach, but from every other part of the grounds. Its architecture is faulty, inasmuch as its colonnade is interrupted, and the wall which supports its dome is not shown above the entablature; but these faults are lost in the feeling of gratification experienced on observing such an object placed in so fitting a situation. Pausing at this temple, and looking from it to the lower grounds, we observe a large sheet of water losing itself, in three directions, among well-tufted woods. The stranger may now be considered as initiated in the charms of the place, and he advances forwards, expecting the continuation of what he has hitherto experienced, new beauties at every step. Nor is he disappointed: for, on the one hand, Milford Water, and varied views of rich distant scenery, supply the most ennobling landscapes; while, on the other, the two striking hills which form the boundary of the park are leading features. In addition to these objects, the house is seen, for the first time, when we are about three quarters of a mile distant from it; it is soon lost again, and we do not catch another glimpse of it till we are very near it. Its first appearance is exceedingly grand, standing on an elevated table land, backed by the two hills before mentioned, and commanding a most extensive range of distant country in front. All that we shall farther say of the approach is, that the wood on each side of it is disposed so admirably that there is not a tree that we could wish to alter. The prominences and recesses of the masses correspond with the elevations and declivities of the surface in some places, thus following up and increasing the variety indicated by nature; while in others they are found on declivities, so as to create variety and intricacy where none naturally existed. There is scarcely a point, along the whole of this approach, at which an artist might not stop and sketch a landscape that would be well-proportioned in its great component parts; and at least harmonious, if not striking, in its details. Arriving at the pleasure-ground, we discovered that the house, the road to it, and some of its accompaniments, are unfinished; and, therefore, we shall not consider them as subjects of criticism. The mansion-house, which was much altered within, and entirely cased with Bath stone without, by the late earl, who died in the spring of the year 1833, leaving it unfinished, is a square building, showing three façades, each about 110 ft. in extent of frontage. The style of architecture adopted is the Grecian Ionic, as used in the Erectheum at Athens. The casing with Bath stone, we think a needless expense, when it is known that walls of brick, covered with Roman cement, are much stronger and much more durable than any wall of brick conjointly with stone. The elevations of the three sides, nearly completed, are plain, and unobjectionable; with the exception of double pilasters at the angles, instead of returned ones, which does away with the idea of pilasters as representations of pillars of support. The chimney tops are also much too low, and very unarchitectural in their forms. The terrace basement is wanting; but this, with various other appendages, will no doubt be added before the place is completed. In the interior are some good-sized rooms, particularly the library. Notwithstanding all this, we are of opinion, that, to produce a house suitable to the situation, the cheapest and best way would have been to pull the whole down and rebuild it. The views from the house, on the entrance front, are singularly grand. To the right, they command the park scenery, with its high hilly outline of wood as the boundary, and the temple beforementioned seen rising from a wooded valley. To the left lies the valley of the Kennet, several miles in width; a rich hilly corn country rising beyond. The principal view from the lawn front forms a striking contrast to those already mentioned. In this view we look down to a smooth grassy hollow, and up to the wild woods of Sidon Hill. To the left of this, the Beacon Hill, with its bold outline and bare surface, the latter partially concealed by a wooded eminence rising from the valley right before it, forms a fine contrast to the rich wooded scenery of Sidon. This last-mentioned hill is ascended by a spiral drive, partly open, and partly wooded, which terminates unexpectedly in a triumphal arch, through which the eye looks down on the house, the pleasure-ground, and the whole park, as on a map. The substratum of this hill being chalk, the turf has the smooth character belonging to the downs or pastures of chalky districts; and this circumstance, together with the wild manner in which sloe thorns, junipers, and other native shrubs have risen up on it, forms a remarkable contrast to the smooth polish of the pleasure-ground, and its groups of rhododendrons and magnolias, below. From the east front of the house is seen, within the pleasure-ground, upon a raised platform, a very handsome Palladian temple, roofed, and having a floor, but open on all sides. It is a most impressive and delightful object, and is in correct architecture, though now somewhat out of repair. This temple (like the circular one on the border of the approach road) is seen from many points of view in the grounds, and always with excellent effect.

" The beauties of this place are entirely the creation of the last two Earls of Caernarvon, father and son. When Henry George, the first Earl of Caernarvon of the Herbert family, succeeded his uncle in 1769, the place consisted of a small pleasure-ground on two sides (the east and south) of the mansion-house, and a long avenue of beech trees, included between two quickset hedges, which connected the pleasure-ground with Sidon Hill. This hill, which is now covered with the most luxuriant vegetation, had then only five beech trees, and a few ash and oak. To the north of the house, a series of enclosed fields and a rabbit warren extended to Milford Water, then subdivided into three ponds, with the natural beech wood beforementioned upon its longest side. Before his improvements were commenced, Lord Caernarvon called in the assistance of the celebrated Brown, whose plan is still preserved in the mansion at Highclere, though it was not followed. It serves to show the great superiority which a proprietor of cultivated taste, who resides upon his demesne, and makes himself master of its capabilities, will always possess over the professional landscape-gardener, taking a transient view, and forming his plan upon undigested data and imperfect knowledge of local details. Lord Caernarvon began his operations by partially destroying the avenue leading to Sidon Hill, throwing down its boundary hedges, and laying down the arable fields in grass on its right and left; thus including Sidon Hill within the park, and extending the latter up to the foot of Beacon Hill, now apparently, though not actually, within it. Then, turning his attention northwards, the park was carried over all the fields and rabbit warren between the mansion-house and Milford Water; which last, having its three subdivisions formed into one lake, was, with its adjoining woods, thrown also into the enclosed grounds. Very extensive plantations stretching from the natural beech wood, along the eastern side of the park, and forming a rich woodland boundary, next occupied Lord Caernarvon's attention. After this, his planting operations upon a large scale were carried to the northwards: Dunsmere Water, in short, a multitude of operations, followed; every successive year producing some extension or developement of his original plans, which were not only pursued with unabated activity during his own life, but were continued by his son, the late Earl of Caernarvon, with equal ardour. A curious memorandum book was kept by the first Earl of Caernarvon [which has been shown to us]. It records many interesting facts connected with his improvements, chronicles the planting and progress of his favourite trees, gives the dates of his successive operations, and must be regarded as a document of great local interest. The mode of preparing and removing large trees described by Sir Henry Steuart, was largely practised by Lord Caernarvon, sixty years ago. Many of the beech trees, now of large dimensions, in Sidon Vale, to the right and left of the old avenue, were so removed soon after 1770. In 1795 and 1796, many large beech trees were transplanted to the north of the house; again, in 1798 and 1799, others were transplanted; again, in 1800; and to various spots, and at various intervals, between these periods and since. These attempts were almost invariably successful. To show how thoroughly Lord Caernarvon had appreciated the principles of this practice, we copy an extract from his memorandum book, written at least forty years ago: —

"'The best way of planting large beech trees of any size is, to cut in the lateral branches, not close to the body, in the beginning of February; and, in the autumn following (or even in the same spring), to cut round the roots, and fill the earth in; letting it stand till the succeeding autumn, or longer, by which time the tree will have made young branches and young roots, and be in vigour, and fit, upon removal, to push immediate roots. It should be taken up without cutting the roots much more, and put into a hole with the earth in mud, filled in and well staked. The young roots will immediately strike, and the young branches shoot. Planting in earth made thick mud is an excellent way. The tree should be planted level with the ground; it suffers, if sunk below the level of the ground. The top or leading branch of a beech, indeed of any tree, should not be cut off.'

"When riding round the grounds at Highclere, the fine taste which dictated the position of the masses of trees, and of single trees, is obvious: how much attention was bestowed upon this point by the above-named nobleman, another extract from his memorandum book will show; and it will, at the same time, afford a useful lesson to all planters and place improvers.

"'In planting single trees about the house, great care should be taken not to hide the house from essential parts of the park; for, though they might be of advantage, when seen from the house, yet, viewed from Smart's Hill, Tent Hill, Hopgood Hill, also from Guines's Coppice, the head of a single tree may hide the house, though you may see under it from the house. Great care has been taken in placing the present trees; which might have been placed better, choosing their position from the house only, but, I think, could not have been placed any where else, taking into consideration the necessity of keeping the view of the house clear for the beauty of the above-named spots, giving at the same time sufficient grove near the house. The best way to ascertain the position of a tree is to fix a white pole, with a white rag hung to it, and then ride round the park to the heights from whence the house is seen. Till I adopted this plan, I was obliged to take away trees inadvertently planted, which is extremely mortifying.'

"The fine cedars which adorn the immediate environs of the house were (with the exception of two, raised from a cone brought immediately from Lebanon, by the celebrated Oriental traveller, Dr. Pococke) all raised from seeds by the first Earl of Caernarvon; and the largest of them was planted out between the years 1773 and 1778. These fine trees may serve to dissipate a commonly prevalent error, which attributes to the cedar of Lebanon the character of slowness of growth; and to show planters that this most stately of evergreen trees actually makes a progress superior to most trees in our climate. A fine specimen, upon the lawn opposite to the north-western angle of Highclere House, was planted there in the spring of 1778, being then 4 ft. high, and having been raised from a cone gathered at Wilton in 1772. Being measured on the 5th July, 1832, its circumference, at 3 ft. from the ground, was 10 ft. 2½ in.; another, immediately to the south of it, being examined at the same time, measured 10 ft. 3 in.; a third, in the park to the north of the house, and close to the back entrance, measured 10 ft. 6 in.: but it is useless to multiply instances. Beeches planted about the same time are not nearly so large. The first Lord Caernarvon, who not only thus improved his grounds, but also added largely to his mansion, and gave it a third front to the north, died in 1812. His plans were actively pursued by the late earl; who, bringing to the task taste of the highest order, added most materially to the magnificence of his demesne. A large extension of Milford Water, not yet completed according to his views; the creation of the exotic plantations surrounding it; a new line of approach to the house, the alteration and improvement of which occupied much of his attention during the latter years of his life, and were left incomplete; and the creation of the curious collection of American plants scattered through the shubberies in the pleasure-grounds, are among the operations of the late Lord Caernarvon. We have spoken of the magnificent cedars which adorn the lawn at Highclere. The heath-mould plants, usually denominated American, are not less striking. Unfavourable circumstances of local climate, which hardly allow an arbutùs to protract a wretched existence, induced His Lordship to rely principally upon rhododendrons and azaleas for the decoration of his shrubberies. To extend the garden varieties, and protract the flowering season of the family, became an object which, most actively pursued, has been attended with uncommon success. By means of hybrid intermixture, the season for these beautiful flowers, beginning about the end of April, lasts till the middle of July, almost three months. The very splendid rhododendrons, brilliant to the highest degree with their crimson corollas, of the variety obtained between the *R*hododéndron arbòreum of Nepal and *R.* catawbiénse, and named, by Dr. Lindley, after the Doomsday name of Highclere (Alta-Clera), *R*hododéndron alta-clerénse [see *Bot. Reg.*, vol. iv. t. 1414., and VII. 472.*], come into flower about the third week in April, and are succeeded by a multitude of splendid varieties both of *R*hododéndron and Azàlea, ending with the crosses obtained between *R*hododéndron máximum and Azàlea autumnàlis rùbra.

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* In this page, Mr. Gowen, the originator of all these hybrids, is spoken of as the gardener at Highclere. This is erroneous; Mr. Gowen should have been designated an amateur of gardening; Mr. Carton was the gardener at the time the first hybrid rhododendrons were raised, and one variety (see *Hort. Brit.* 29193.) is named after him.

The number is continually increasing; and, however perplexing to the botanist, who will have the disagreeable task of distinguishing between indigenous species and these endless horticultural varieties, yet it must be owned that to this art of hybridising the flower-garden is, and will be, indebted for a great accession of beauty and enjoyment. Of the many achievements of this nature at Highclere, the most striking is to be found in the crosses effected between *R.* arbòreum and the hardy species. These hybrids, which as far surpass the common rhododendrons as the new double Scotch roses do the old wild ones, are perfectly hardy, exceedingly floriferous, and cannot be surpassed in splendour. Of the azaleas, the most splendid are bred between the fine garden varieties of Azàlea calendulàcea and Azàlea nudiflòra var. rubéscens; and it may be predicated of all these hybrids, that they possess a much greater tendency to profuse flowering than the unadulterated species. [Some account of the origination of these will be found in VII. 62.] The history of the hybrid *R.* alta-clerénse is curious in the way of floricultural anecdote. To obtain it had been a great desideratum; but the specimens of *R.* arbòreum at Highclere had shown no disposition to flower. The only places in England where it then (1826) flowered were Hylands (Mr. Labouchere's), and at the Grange. From the latter place an umbel was obtained and conveyed to Highclere in a tin case. By means of its pollen the flowers of *R.* pónticum and *R.* máximum were fecundated, and about 1800 seedlings were raised, many of which, after supplying his private friends, Lord Caernarvon desired might be distributed among the nurserymen. This was done in the spring of 1831. Those which were retained at Highclere have now attained a flowering age, and form extensive shrubberies round the house."

The pleasure-grounds are about 100 acres in extent, and contain many fine specimens of exotic trees and shrubs, among which were tulip trees, black walnut, deciduous cypress, Virgíl*ia* lùtea, and Magnòl*ia* acuminàta and tripétala. The climate is so severe, that M. obovàta and the stuartias can hardly exist. Among the shrubs, a large-leafed variety of Coloneáster microphýlla insulated on the lawn, its branches covering a space of thirteen yards in circumference, is a very conspicuous object. The formation of these shrubberies, we were told, was an arduous operation: the ground has been made to the depth of between three and four feet, and the mould was carted from the park woods in the vicinity of the lakes, a distance of nearly two miles.

"The climate of Highclere, as might be expected from its situation, immediately under the northern termination of an extensive range of bleak woodless downs, is very unfavourable to horticulture. The profusion of lichens and green moss upon the trees attest its humidity. Many shrubs which endure the open air well at Newbury, only five miles off, live with difficulty here; and the only counterbalancing advantage is a comparative exemption from autumnal frosts. The site of the house is about 600 ft. above the level of the sea. Cunninghàm*ia* lanceolàta lives out well in a shrubbery in the pleasure-ground. Among the rhododendrons is a healthy specimen of the very scarce *R*hododéndron campanulàtum (Nepal), which has not yet flowered. It has the habit of a sturdy bush, or rather, perhaps, of a small tree. Its leaves are about the size of those of *R.* catawbiénse, and are of a very deep green on the upper surface, but beneath are covered with the deepest cinnamon-coloured pubescence. [This rare and beautiful rhododendron has lately flowered with Messrs. Loddiges, and in Mr. Knight's Exotic Nursery. The corolla is white spotted with lilac, large, and bell-shaped.] We noticed two beds, containing nearly 100 bushes of hybrids between Azàlea and *R*hododéndron. The method lately pursued, as before mentioned, is to mass the varieties and species as much as possible together. Thus, Andrómed*a* acuminàta, forming a small bed, is very ornamental. *E*rìca vàgans is so treated, and kept compact by an annual cutting in with the garden shears; Menzièsi*a* cærùlea, gualtherias, and the close-growing vacciniums, are all so treated, and with great effect. Indeed, small low shrubs, like the humbler rhododendrons, andromedas, vacciniums, and ericas, planted in large shrubberies, produce no effect compared with what they do when indulged with a space to themselves, where they are free to show their natural habits. *S*piræ`a trilobàta is very handsome, when so treated; as are *S.* bélla and *S.* *a*riæfòlia. *Rìbes* sanguíneum grows rapidly at Highclere, but dies suddenly in the middle of summer, when three or four years old, in whatever soil or exposure it has hitherto been placed. Of *C*ratæ`gus grandiflòra and tanacetifòlia there are fine specimens, near the house: the yellow fruit of the latter is eatable, resembling an apple, but more insipid. *N*ymphæ`a ádvena thrives exceedingly in Milford Lake, and is very hardy. Among the rarer aquatics is *N*ùphar mínima. A double-flowering American sagittaria has increased rapidly. *P*ìnus Douglàs*ii* appears to be of very rapid growth, and extremely suitable to the climate. *T*ília heterophýlla is a tree of very fine foliage, and apparently of rapid growth. The progress of *A*'cer macrophýllum has been very rapid; and it seems probable that most of the trees from north-western America, near the regions of the Columbia River and north of it, will find in England a very congenial climate. Virgíli*a* lùtea flowered profusely at Highclere last spring, in racemes of moderate length, inodorous and not showy, being hidden in the exuberant foliage. A specimen of Magnòl*ia* conspícua, in the pleasure-ground, grafted upon a stock of Magnòl*ia* acuminàta, is in all respects more vigorous than one raised in the usual manner upon a stock of Magnòl*ia* obovàta; its foliage is deeper in colour and thicker in substance, and its flowers much more numerous.

"A fine weeping ash, also in the pleasure-ground, which had remained for several years stationary in height, suddenly made a strong perpendicular shoot nearly 10 ft. in length, which now forms the head of the tree; its luxuriant branches having quite overwhelmed the original tree. *Q*uércus fastigiàta, on the banks of Milford Water, is interesting, from its perpendicular habit, resembling that of the Lombardy poplar."

Besides the shrubs above enumerated, we noticed *D*iospy̆ros virginiàna, Ny̆ss*a* aquática, *Negúndo f*raxinifòlia; Liquidámbar, both species; Dírca palústris, 3 ft. high, with a stem 6 in. in diameter; *R*ùbus nutkànus, which has the habit of the Virginian raspberry, and bears an eatable fruit, resembling the cloudberry in size and appearance; *R.* spectábilis, and several other species; all the new species of *Bérberis* and Mahòn*ia*; a complete collection of named vacciniums; all the azaleas, both of the British and Continental nurseries, besides numerous new hybrids already mentioned, some of which were still in flower, while on others the capsules, impregnated with a view to new varieties, were nearly ready to gather; and a good collection of roses, standards, and dwarfs, among which was the Highclere seedling, one of the most beautiful of the tea-scented China roses and a free flowerer throughout the whole season: budded in May, these roses will flower in the August of the same year. The best stock for this and the other China roses is the *R.* Bánks*iæ*. Among the herbaceous plants, which were now in splendid beauty, producing most brilliant masses of colour in groups on the lawn, were, *L*ílium tigrìnum and *L.* canadénse, and *Yúcca* glaucéscens, which has the habit of *Y.* filamentòsa, flowering yearly, but much more freely, with larger and more numerous blossoms, and more elegant foliage. This plant was first given to the nurseries from Highclere. Campánula lactiflòra forms a fine lawn plant, either singly or in large masses; the lobelias, georginas, lupines, phloxes, potentillas, asters, gladioluses, petunias, mimuluses, and many of the new Californian plants introduced by Douglas, added to the beauty of the scene. It deserves particularly to be remarked, that the dark purple candytuft and Clárk*ia* pulchélla form the best masses when mixed with mignonette, and the same may be said of other showy but naked-stemmed annuals; and, farther, that all these flowers, and, in general, all the ornamental shrubs, are introduced in masses; sometimes, as in the case of the snowberry, of one species only; and in others, as in *R*ùbus, *E*rìca, *R*hododéndron, &c.,

of several species and varieties of the same genus. If the great woods of the place were to be planted over again, this principle would be more attended to, with regard to the forest trees; but it must be recollected, that, when these woods were planted, about the middle of the last century, and, indeed, not till near the end of it, there was not, in any nursery in the island, above a dozen kinds of forest trees to be procured, in quantities sufficient for making large plantations.

In a walled flower-garden, on a declivity facing the south, and concealed by wood, are innumerable valuable plants. The exterior of the wall is varied by piers and arches of ivy, the panels between being filled in with choice deciduous climbers and roses. In this garden we found fine collections of carnations, pinks, and other florist's flowers; beds of hybrid ixias, and other hybrid *Irídeæ*, raised by that enthusiastic vegetable hybridiser, the Hon. and Rev. William Herbert of Spofforth, brother to the late Earl of Caernarvon, whose garden has been described by a correspondent. (VI. 531.) We were delighted to find here that Gladìolus natalénsis propagates so readily by offsets, that one bulb will produce 100 in a season, which, when well treated, will flower the following year. We trust soon to see it in every cottage garden. Cypélla Herbért*i*, a beautiful ixia-like plant, was in flower. In the plant stove there is a good collection of epiphytes, well grown, especially rhinanthera. Plumièr*ia* bícolor was in flower; and also a large plant of Lagerstrœ̀m*ia* índica, besides numerous smaller or more common articles. The crops of grapes, peaches, and pines, in the houses and pits in this garden, were good. To produce a moist heat from hot-water pipes in the pine-pits, Mr. Carton (the very excellent gardener) had them covered with moss, which he watered occasionally with clear water; and, if we remember correctly, occasionally with horse-dung water, in order to produce ammoniacal gas to destroy insects, and carbonic gas to nourish the plants. The practice of watering with horse-dung water, we believe, originated with Mr. Pillans, late foreman to Mr. Forrest at Syon, and now head-gardener to Lord Ducie at Woodchester Park, near Minchinhampton, Gloucestershire; who, we hope, will favour our readers with an account of this and some of his other new and valuable practices. We observed a number of vines, in pots, raised from the eye the same season, which were expected to produce several bunches of fruit each the next year. The cuttings of the vines are first planted in very small pots, and shifted, as they advance in growth, into pots of larger size, till the latter are, at last, a foot in diameter, when they are placed in large saucers, and fed with liquid manure. The pots are placed at the back of the house, close under the glass, and the shoots are trained on wires down the slope, so as to give the leaves every advantage of sun and heat. It is expected that each vine will produce five or six bunches of grapes; those of Mr. Pillans, similarly treated, having produced 450 lb. of grapes from seventy pots; the vines, when the fruit was ripe, not being more than eighteen months from the eye. This may be considered as the extraordinary result of extraordinary skill, attention, and perseverance. It may be useful and commendable in gentlemen's gardens; but, as it requires much more labour, as well as skill, than can be afforded by most persons who wish to grow grapes, it is not intended to supersede the simpler and more certain modes. It may be considered as a prize essay.

The kitchen-garden is here but a secondary object of attention. The soil is naturally a strong clay; but part of it has lately been greatly improved by burning some of the subsoil, and mixing it with the surface. The operation is performed, during the summer season, on the spot, by heaping up a coating of clay upon a ridge of fagots, and setting fire to the latter, in the manner explained in detail in our *Encyclopædia of Agriculture*. The clay is put on in rough spadefuls, and, when the burning is completed, it is spread over the ground from which it was taken, at the rate of a good dunging. There is here a very good gardener's house; and we found in it an excellent garden and miscellaneous library, belonging to Mr. Carton. Among his miscellaneous books were the Waverley novels and the *Cabinet Cyclopædia*.

After spending several hours in seeing the grounds about the house, we drove down to the sheet of water called Milford. This was a favourite spot of the late Lord Caernarvon. As a piece of home lake scenery, it is beautiful; and, as altogether the work of art, with the exception of the sloping bank covered with natural wood, it is admirable. A large wood, remarkable for the size and richness of its hollies, is connected with this natural beech wood by extensive plantations of fir and larch. The holly wood, which is called Penwood, possesses great beauty. The undergrowth of the woods and islands of this lake of Milford Water is entirely composed of rhododendrons, azaleas, kalmias, and other American evergreens, which attain a vast size, and sow themselves. There are numerous Nepal hybrids here; and they are found to stand the drought better than the common sorts. Altogether, we do not know any place in the country where there is such a great extent of American trees and shrubs. There are even some exotic aquatics in the water; and it is in contemplation to scatter the seeds of many of the most beautiful of the North American annuals in the woods, as is now doing at Dropmore. Among the native trees are some very large beeches, one of which is 18 ft. in circumference at 3 ft. from the ground, and 24 ft. close to it. Another larger-stemmed tree, close to this, is 13 ft. 8 in. in circumference, at 3 ft. from the ground. There is a large ash, near these beeches, which is 13 ft. 8 in. close to the ground; and there is an ash in the park 16 ft. 8 in. in circumference at 3 ft. from the ground. These large trees are supposed to be aboriginal.

"The summit of Beacon Hill is crowned with a very fine British entrenchment. Several barrows at the foot of the hill were opened some years ago, and found to contain burnt bones, spear and arrow heads of bronze, and some small ornaments of thin gold, which had obviously been used as a covering to a nucleus long since decayed. The elevated barrows had contained the bones of warriors; the smaller ones, which were only slightly elevated above the surrounding ground, contained smaller bones (apparently either those of females or young people), which were unaccompanied by implements of war."

After this slight outline of the leading features of Highclere, it remains for us to give our general opinion of its beauties. Taking it altogether, then, and considering it as a whole, and with reference both to nature and art, we know of no inland place to equal it. There are more striking portions of ground at many places; for example, the brow on which the house is situated at Pain's Hill, with the river below: there are more romantic situations, as at Hafod; situations in which rocks and a natural river have a prominent effect, as at Auchincruive; or rocks without a river, as at Hawkstone: there are more striking situations by art, and where architecture is included; as in the view of Blenheim, on entering the Woodstock gate; or of the enchanted valley, at Alton Towers: but, decidedly, in our opinion, there is no place in England where so much dignity of character, so much elegant variety, and so much cultivated beauty, is preserved throughout a place of such great extent. We set little value on the rhododendrons and other pleasure-ground ornaments, compared with what we think of the style of planting which has been everywhere adopted, of the formation of the water, and of the distribution of the views of the house. The ground floor of the house is not sufficiently raised; and the direction of the approach to it might be improved. There are several minor points which may also admit of correction; and the woods, and plantations of American shrubs on the lawn, like all others that are intended to continue to look well, will require constant thinning: but all these things are as nothing in the scale, when weighed against the natural beauty of the grounds, and the judicious disposition of the woods, groups, and scattered trees. We know no place in which the trees are as well disposed over so great an extent of surface. Portions of Pain's Hill, Caversham, Esher, and a few other places, may be compared with Highclere; but these are only portions, not in all exceeding a few acres: while here we have a park three or four miles in length, and averaging a mile in breadth. Let the reader who has an opportunity compare the planting which has been done in the park at White Knights, both that done by the original planter about the same time as that at Highclere, and that done under the direction of the Duke of Marlborough, and say in which is the superiority of taste and judgment. There are few, however, who can profit from the study of such places as Highclere and Pain's Hill; and this is the reason why we have always heard the former place mentioned for its hybrid rhododendrons and azaleas, and the latter for having been the first where rhododendrons were raised from American seeds; and never, either of them, for the disposition of the trees.

There is, however, one point, in respect to Highclere, which, we have no doubt, will come home to the bosoms both of gardeners and their employers; and an important point it is: that is, that all the American trees and shrubs, which now make such a conspicuous figure there, were raised on the spot, either from seeds procured from America, or from plants which had ripened them in this country. We are assured that not more than 20*l.* have been paid at Highclere for nursery plants during the last twenty years. Perhaps we shall be blamed by nurserymen for mentioning such a thing. We should deserve blame, however, much more, if we were to preserve silence. The reason why gentlemen have had recourse to raising American plants from seed, 'is because more has been charged for the plants by the nurserymen, than many gentlemen could afford to give. So far from blaming gentlemen for raising trees from American seeds, we commend them for it; and we are persuaded that nurserymen would do so likewise, if they saw the result in its true light; viz. the spreading of a taste for foreign trees and shrubs. Persons in business may rely upon this, that there is not one gentleman in a hundred, who can afford to purchase plants from a nurseryman, who will take the trouble of rearing them from seed for himself. Gentlemen who are not rich, or those whose expenditure in matters of improvement or taste treads closely on the heels of their incomes, may become their own nurserymen; but the effect of wealth is, in almost all cases, to induce a desire for ease, and to purchase the results of labour, rather than to labour to produce results. Besides, were the practice alluded to to become general, the seed business would be greatly increased; and, in this case, what difference could it make to a nurseryman whether he derives a profit from importing and selling seeds, or raising plants from these seeds? The truth is, all businesses and all pursuits are continually changing with the progress of society. This complaint, of gentlemen becoming their own propagators, has been repeated for the last thirty years: but have not nurserymen multiplied tenfold during that period; and, if so, what is the reason? As well might we say that no gentleman ought to lay out his own grounds: but, if this were the case, where would have been Woburn Farm, White Knights, Pain's Hill, and Highclere? The truth is, that, without such deviations from commonplace routine, there would neither have been landscape-gardening, in the modern sense of that expression, nor would the business of a nurseryman have extended beyond that of a mere grower of fruit and forest trees. Highclere is an example of what the late Sir Uvedale Price always held forth to the world; viz., that any gentleman who wished to make his place what it ought to be, ought to study the subject of planting and laying out grounds himself. This is precisely what the last two proprietors of this place have done; and Highclere, in its present state, is the result.

For the passages in inverted commas in the foregoing article, we are indebted to a gentleman better acquainted with the localities of Highclere, than we could be by our transient visit.

ART. II. *A Series of Designs for laying out Kitchen-Gardens.* By MR. T. RUTGER. Design 1., *Containing an Acre within the Walls.*

IN offering a series of what may be considered as working-plans for the formation of kitchen-gardens, I deem it necessary to enter a little into detail upon the subject. In the first place, it must be understood that I do not offer these designs as standards of excellence, not be improved upon or excelled; but rather that I submit them to draw, from the more experienced, observations or designs serving to illustrate such principles and rules as will tend to effect the object in view. In the designs there will be nothing of a fanciful description introduced (except when a flower-garden may be given); utility and convenience only being studied. They are likewise intended to be so composed that one may assist another; either by enabling the designer to add to one from another, or to reduce one to the size of another, as it may be thought desirable in laying out the ground.

I am aware that much has been written about the aspect and situation of kitchen-gardens; pointing out the advantages and disadvantages of each, according to the views of various writers upon the subject. However, without offering an opinion upon these points, and believing that, in most instances, a southern aspect is approved of, the following series will be arranged accordingly; and as to situation, this must be left to

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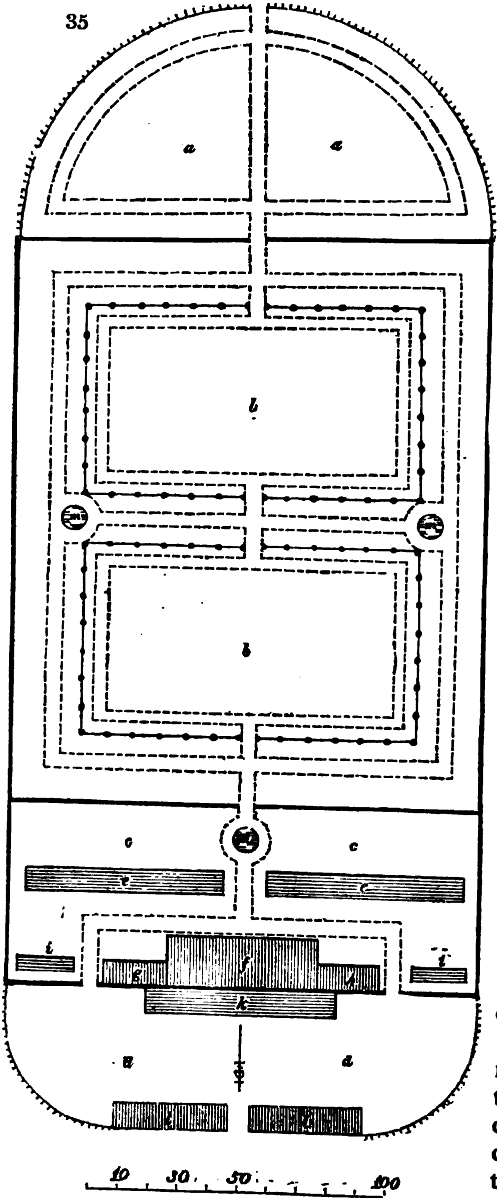

a a, Fruit-garden, and for potherbs. *b b*, Culinary department, with espaliers. *c c*, Forcing department. *d d*, Department for compost, mixing dung, &c. *e e*, Ranges for melons and cucumbers. *f*, Pine stove. *g*, Peach house. *h*, Vinery. *i i*, Pits. *k*, Back shed. *l l*, Mushroom sheds, or for other purposes. *m m m*, Water basins, or places for pumps.

the judgment of those who may think any of the plans worthy of being adopted, in part or wholly, as the groundwork of their operations.

With regard to form, it will be seen that I favour the oblong, with the slip made circular on the south, or point of principal entrance: this, in my opinion, falls in better with an adjoining shrubbery than a straight fence would do, should a shrubbery be proposed.

Espaliers being objected to by some and approved of by others, they must be left to the will of such as like to adopt or discard them. However, I consider them both useful and ornamental, and that, in both respects, they more than compensate for the injury which it is thought by some they do the crops.

The height of walls must also be left to the judgment of the designer; only in this case I beg to observe, that, if, according to the scale of these designs, there is not a sufficient space between the back wall of the gardens, and the frames or houses in the rear, for the latter to receive the full influence of the sun's rays, even on the shortest day, more space must be given. It must be noticed, also, that, although the forcing-houses will be named and particularised in the references, it is not intended that they should be adopted any farther than may be approved of, or deemed necessary, with such alterations as may be found requisite to make them answer better for their intended purposes. If room cannot be afforded behind the frame ground for compost, &c., the space in front of the frames can be appropriated for that purpose; and, in that case, some other place must be found for working the dung for the frames. With respect to the slips, they will appear uniform in the plans; but, as it may not be convenient in every case to follow this rule, any other convenient form can be substituted. The pathways that it may be deemed necessary to place in and through the quarters will be left to discretion.

With these few preliminaries, I submit to you the ground plan of No. 1. of the series (*fig.* 35.), which contains barely an acre within the walls, including the forcing department: this, not being available for crops, is compensated by the entrance ground. If side slips are wanted, reference may be made to plan No. 2., in which a difference will also be made in laying out the quarters of the garden. T. RUTGER.

Shortgrove, Essex, 1834.

ART. III. *Design for a Gardener's House, adapted for the North-East Angle of a walled Kitchen-Garden.* By Mr. ROBERTSON.

HAVING, in preceding articles, given designs for gardeners' houses, suitable for being placed on the four side walls of a kitchen-garden, we now proceed to give designs for the four angles, which will complete the series. We are happy to find that these designs have directed the attention of gentlemen to the manner in which their gardeners are lodged, in different parts of the country; and that new houses, in some cases, and additions to old ones, in others, have been the consequences. We have now before us three beautiful sketches of gardeners' houses which have been thus originated, and which we shall probably give, after the present series is completed.

Another improvement which has taken place, connected with gardeners' houses, is the removal of trees, shrubs, climbers, &c., which often used to cover them in such a way, as not only to render ventilation utterly impossible, but even to exclude the light. Some very handsome and commodious gardeners' houses have been, from this cause, rendered very unwholesome.

The present design (*fig.* 36.), like those which have preceded it,

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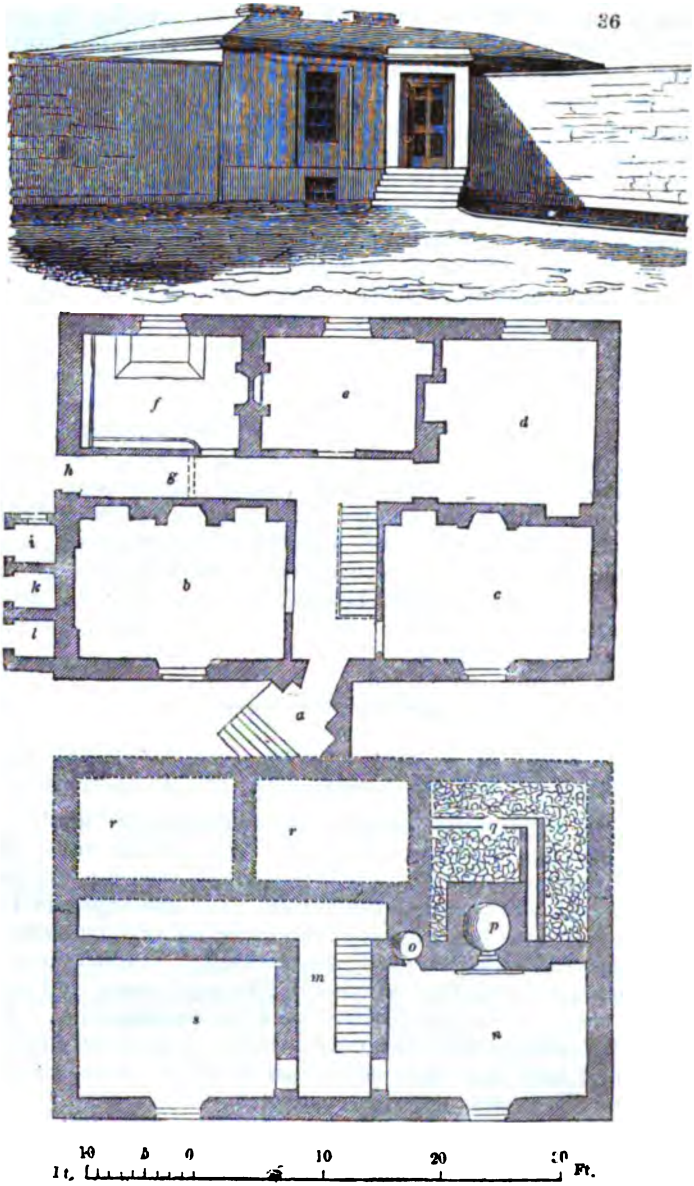

The principal floor contains: — *a*, Entrance from the angle formed by the garden walls. *b*, Kitchen. *c*, Parlour. *d*, Bedroom. *e*, Bedroom. *f*, Office, with desk and book-shelves on two sides. *g*, Wicket, to which the men come in by the back door, *h*, and through which they are admitted, one at a time, into the office, *f*, where they are paid. *i*, *k*, *l*, Places for ashes, coal, and wood.

The cellar floor contains: — *m*, Staircase. *n*, Kitchen and bakehouse. *o*, Boiler. *p*, Oven. *q*, Flue from the oven, for the purpose of heating a mass of stones, to communicate warmth to the whole house, in the manner explained at length in the article on cottage husbandry and architecture. (VI. 139.) *r r*, Two root cellars. *s*, A beer cellar, or lumber place. There is no other floor to this house, it being intended for a gardener with a small family.

has not the slightest pretension to ornament; the object of these designs being merely to show the arrangement of the rooms, and the connection of the walls with those of the garden, in such a manner as that any country mason or bricklayer might build from them.

ART. IV. *Strictures on disposing Plants in Masses.*

By CALYCANTHUS.

THE system of disposing plants in masses, so frequently and ably advocated in this Magazine, is becoming very general, and certainly produces a much better effect than the tedious monotony of an indiscriminate mixture. In the practice, however, of this superior method, it should be remembered that the groups and masses ought to be considered as parts of a whole, and, as such, should harmonise and unite with each other, with regard to form and colour. Without attention to this point, the several disunited and independent parts will no more form a gardenesque landscape, than the colours arranged on a painter's palette will of themselves form a picture. I have known more than one small garden spoiled by a disregard of proportion, the shrubs and flowers being disposed in groups of far too large a size. In such a situation, a single plant, or a group of two or three, must be considered to bear the same proportion to the whole, as much larger masses or groups bear in the case of a park. Although I approve, as I have said above, of the principle of placing different species in groups and masses, I think that there are cases in which this, like all other principles, may be carried too far. In a small flower-garden which I very much admire, I have seen a group, composed of myrtles and China roses, planted alternately in quincunx order, the larger plants being in the centre; and, in my opinion, a better effect was produced than if the two species had been in separate masses: the rich green colour of the myrtles' leaves, forming a ground to the beautiful white of the flower; the light and elegant foliage and pendent bloom of the rose; the mingled colour, and the associations connected with both, made an impression upon me which I shall not easily forget. In the same garden there is a group consisting of an acacia, a sumach, and a laburnum. The light feathery elegance of the acacia, the broader and more shadowy plumes of the sumach, and the pendulous clusters of flowers of the laburnum, compose a little picture of the most highly finished character.

Gardeners might find much instruction from an examination of cottage gardens, in many of which I have seen a degree of good taste that is not always found where there is more reason to expect it. In such gardens, it often happens that very striking effects are produced by a judicious disposition of plants of the most common description; and I think it would be a very useful study to endeavour to imitate them with plants of more rare and choice species. I was once much struck by a particular effect (not, however, of sufficient general interest for a place in your Magazine) produced by a plant of the common hop; and it was not until after many trials that I could find a substitute for it among more choice plants: at length, however, I succeeded to my own satisfaction by means of one of the genus *Clématis*; the species I do not with certainty know, as it has never flowered during the three years that it has been in my garden.

In small gardens, nothing can be more unpleasing than a want of neatness and high finish; it reminds me of a flower-painter of the last century, who used the most dingy and sombre colours that he could find, saying that he imitated Raphael, and painted for posterity. In the case of a small garden, it should be remembered that, whatever may be the beauty of the design, constant attention, and the frequent removal of plants, are indispensable: three or four years of neglect would leave nothing, either to posterity or the designer himself, but a tangled and matted thicket of such plants as might come off conquerors in the struggle for life incident to want of sufficient space.

Hastings, April, 1834.

ART. V. *On Defects in the Management of Fruit Trees.*
By Mr. ROBERT ERRINGTON.

ALTHOUGH so much has been said and written about various modes of training and managing fruit trees, you may, perhaps, yet spare room for a few more remarks on the subject. It will be generally admitted, I think, even by most practical men (by the by, a class rather slow to admit any thing which implicates themselves), that the cultivation of fruit trees generally is not so successful as might be desired, and, from long practice, expected. My attention is at this time called to the subject by some remarks of yours, IX. 671., in which you say, "We shall be much surprised, if, when the doctrine of disbudding comes to be generally understood, it does not effect a very considerable change in the mode of managing every description of fruit tree which requires to be trained in any particular form, or kept within any particular bounds less than what are natural to it." Your remarks I consider just in a very considerable degree; and hence appears the propriety, and, I may fairly say, necessity, of adding philosophical to practical knowledge in our profession. The common expression among us, that "leaves make roots, and roots make leaves," is either not sufficiently understood, or not allowed to regulate practice. It is difficult to say whether the ill success of most gardeners, as to producing permanency and productiveness in fruit trees, arises from the mismanagement of the top or of the root. In one instance, we see borders, as they are called, made by an excavation deep enough for the bed of a river, which is filled with materials containing richness more than sufficient to grow the bloated tree to the size of an immense standard. Here, while the soil is new, and possessing some strength, the ill-fated gardener may ply his nippers all the year round in removing robbers and superfluities of his own creation; and in two or three years may rival the globe for willow twigs. By degrees, the immediate proportion of manures contained in the soil becomes entirely decomposed, and, by the villanous spade culture on the top, the soil comes to as fine tilth as though it were riddled. Thence, in wet seasons, ensues entire stagnation, and, in very dry ones, mildew and other baneful diseases. These evils arise in consequence of the soil's losing nearly all assistance from the purifying and invigorating efforts of the atmosphere; for it is either swamped or baked, and in both cases it is, at it were, hermetically sealed. In another case, borders are made by trenching abundance of manures into loose sandy soils on a hot gravelly bottom; better adapted for barley and turnip culture than for a class of trees of which sound loams are the "life and soul." Here, at first, while the dung lasts, together with moderately moist seasons, the trees appear to flourish in grand style, and the proprietor chuckles over them, well pleased that he did not follow the advice of those who (knowing the unstable character of such soils) suggested to him the necessity of strengthening the staple: all this, he now perceives (or thinks he does, at least), would have been unnecessary expense. The manures in such soils, once exhausted in producing the mere framework of a tree, which the soil can never long maintain, nothing more is needed than a heavy crop of fruit for a season or two, a burning hot summer, and some spade culture over the surface roots, to complete the career of this tree, and then the sooner it is set fire to the better. Certainly top-dressing will do much in such a case (especially if the spade is unknown to such a border), but can never give that stability and endurance to the tree, and that flavour, quality, and weight to the fruit, which are the constant effects of a good loamy soil. Then, as to top management, which may be said to comprehend, mode of training, summer disbudding, summer stopping, thinning the fruit, winter pruning, &c.: assuming (what, I presume, will be readily granted) that, in a cool damp climate like that of Britain, light, heat, and a circulation of air are of immense importance, in regard of the fructification in fruit trees, do we find anything like proper attention paid to these important principles? Exceptions there are, we know; but what is the most general practice? Shoots are crammed in, as though the quantity and quality of the fruit were to be determined by the number of these alone; or probably, in the tender stone-fruit trees, the young wood hanging from the wall till nearly August, is thereby deprived of all the advantages arising from the accumulated heat of the wall; and trees of this description I have noticed, which had received all the attention possible in their winter pruning, at a time when light and heat were comparatively of little importance to them, and which were yet left in the summer to the above ill fate.

It may now be fairly expected, that, after having pointed out the defects in the present practice, I should have something new to offer on the subject; but you must be aware, that to treat it in all its bearings would occupy more space than you could spare. I will, however, if agreeable, in a future Number, offer my ideas on the management of fruit trees, and will give you the skeleton of a plan I should adopt, were I going to lay out a new kitchen-garden, and allowed to follow my own plans entirely.

Oulton Park, Cheshire, Jan., 1834. R. ERRINGTON.

WE shall be happy to receive the proposed communication. — *Cond.*

ART. VI. *Notes on Vines and Vineries.* By AN EXPERIENCED GRAPE-GROWER.

THE border in front of the vinery should be from 30 to 40 ft. in width, and should be formed of loamy soil, sharp sand, and at least a fourth part of well-rotted horse-dung. The vines may be planted on the outside of the front wall, but the stems should be taken through it below the level of the surface, so that they may never appear on the outside. When it is desired to swell the fruit to a large size, the border should be well watered every evening in the swelling season, and covered during the day with litter, to prevent evaporation. The most desirable sorts of plants in a vinery are Money's muscat eshcolata, Tottenham Park muscat, white frontignac, red frontignac, Money's West's St. Peter's, Money's eshcolata superba, black Hamburgh, black Constantia, black prince, and white Hamburgh. This last grape is not so well known as it ought to be. It is by some confounded with the Syrian; but it ripens much earlier, and, when it is grown in heat, it is an excellent grape. Others mistake it for the white Portugal; but the latter grape has a much thicker skin, and its juice is more watery. The white Hamburgh, when it ripens, is somewhat speckled with red. In order to have very late crops of grapes, the house should be kept very dry, by giving air every fine day, and supplying no more fire heat during winter than is barely sufficient to keep out the frost. If the house is in the neighbourhood of much coal smoke, the laps between the panes should be puttied, and the putty should be such as will not crack; which is effected by putting 1 lb. of white lead into every 10 lbs. of putty previously to using it, and using, instead of common linseed oil, which dries and shrinks, sweet or train oil, which dries slowly, and causes the putty to take a firmer hold of the glass.

When the rafters of a house are 25 or 30 ft. long, there will require to be three tiers of sashes; and these, if put in according to the usual plan, would require the rafter to be very deep in its upper part. To prevent this, cut the fillets which support the sashes, not in the form of parallelograms, as is usually done; but in the form of right-angled triangles, of the full breadth of the fillet at one end, but diminishing to a quarter of an inch at the other. The wires on which the vines are trained ought to be 7 in. or 7½ in. from the glass.

In planting the vines, first open a hole, then set a pot containing a plant in it; next break the pot with a hammer, but take care not to break the ball of earth; then take the outside fibres and roots, that appear on the surface of the ball of earth, and spread them out, covering the whole with soil, and afterwards watering and shading.

When fruit is swelling and ripening, care ought to be taken to admit abundance of air, for nothing is more injurious to grapes than damp, especially if the berries are close on the bunch. The damp first seizes the footstalk of the berries; they will then shrivel, or turn red, and, when tasted, will be found sour. In damp weather, the best mode of expelling the damp is to have a good fire in the daytime, and to give abundance of air; by which means the moisture evaporated is carried off into the exterior atmosphere. S. A. M.

Hampstead, November, 1833.

Art. VII. *Notice of some Modes of training Wall Trees, practised in the Gardens of Hopetoun House.* By Mr. James Smith, Gardener there.

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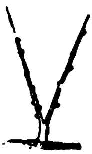

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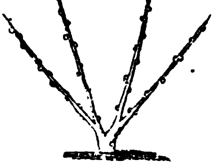
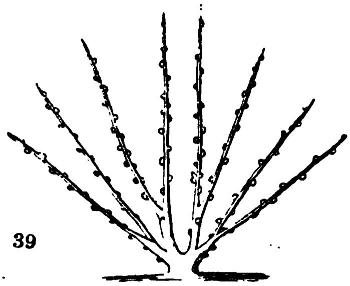


From the extent of walls in this place, the various trees are trained in different shapes. Of the finer apples and best late pears, some are trained horizontally, and others in the half fan form; and, as you seem not to have noticed the last-



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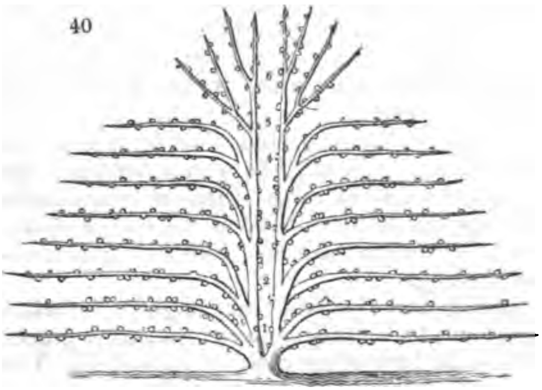

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mentioned method, I beg leave to send you the following sketches and descriptions of it: — *Fig.* 37. represents a tree one year from the graft, newly planted, and afterwards cut down to two buds on each shoot. *Fig.* 38. represents the same tree two years old, and fan-trained. *Fig.* 39., the same tree three years old, cut back and fan-trained. *Fig.* 40., the same tree, six years old, fan-trained; the shoots brought down in a curvilinear form to the horizontal direction; and the different years' growth marked 1, 2, 3, 4, 5, 6. The centre is still trained in the fan form, and the branches are brought down yearly; until the tree reaches to the top of the wall, where the fan-training terminates, and the branches are trained forward horizontally. Nothing more is necessary than to keep the trees in good order, and to encourage the leading shoots.

Hopetoun House Gardens, Feb. 3. 1834. James Smith.

Art. VIII. *On the Culture of the Onion by Sowing and Transplanting.*

By Mr. Wm. Taylor, Gardener, Liverpool.

About the latter end of May, make up a seed bed of light soil, and raise it 6 in. above the level of the path round it, in order to keep it very dry. A bed 3½ ft. wide, and 18 ft. long, will require half a pound of seed. By the latter end of August, the bulbs will be about the size of peas, and will be ready to be taken up, that they may be kept dry during the winter. About the middle of the following February, plant them in drills, about 8 in. apart, with the bulbs from 4 to 6 in. apart in the row, and cover them with a full inch of soil. Some rich manure may be laid in the bottom of the drill, if convenient. In this manner I have grown a crop of onions, averaging from 14 to 16 oz. each.

Lorton Street, Liverpool, Jan. 13. 1834.

REVIEWS.

Art. I. *The Physiology of Plants, or the Phenomena and Laws of Vegetation.* 8vo, 298 pages. London, 1833.

This very interesting little volume is, we believe, by Mr. Murray, whose *Manual of Chemistry* was noticed in IX. 607. The work is divided into thirteen chapters, which treat of the distinction between animal and vegetable being, the composition of the plant, the root, the stem, the blossom, seeds, the phenomena of germination, the ascent and circulation of the sap, the peculiar secretions of plants, the condensation and retention of moisture by trees, parasitic vegetation, extremes of temperature in relation to vegetation, aquatic vegetation, purification of the atmosphere, eccentricities of plants, relations of light and electricity to plants, age of plants, &c.: and, under these heads, the work contains a mass of interesting facts and phenomena in relation to vegetation, from the germination of the seed to that period when, deprived of the animating principle, the plant becomes the subject of that purely chemical agency which finally accomplishes its total decomposition.

As the excretory organs of plants are now engaging the attention of several of your correspondents, it may not be out of place to give the author's ideas upon the subject: — "In a variety of experiments made with the hyacinth raised in a bulb glass, and supplied with distilled water, I constantly found that the water in which the fibrils were extended became soon impregnated with carbonic acid gas, when excluded from all external sources of its production; and, by the addition of a little lime-water in the first instance, I sometimes had an interesting deposition, on the sides of the glass, of minute rhomboidal crystals of transparent carbonate of lime. It seems to me, therefore, that the functions of the root are twofold, and that it is composed of two classes of organs, one of which act as absorbents, and the other as excretory vessels: the former appear to be resident in the spongelets, and the latter in the cortical pores. It is worthy of remark, as connected with this question, that coloured fluids, which find an easy ingress through the spongelets, will not pass through the cortical orifices. The superfluous egesta occasioned by an unusual richness of the soil cannot be evolved in a sufficient ratio by the foliage. During the presence of the sunbeams, leaves cast off oxygen, while the carbon of the carbonic acid gas is appropriated and assimilated: but it is by no means probable that the entire quantity of carbonic acid gas which rises in the stem during the day can be constantly decomposed amid the various changes of light and shade, to make no mention of the liquid matter which has been evolved."

In treating of the blossom (chap. v.), the author adverts to it as the foundation of the beautiful system of Linnæus, upon which he passes the highest eulogium, while he asserts that "what has been lauded as the natural system is the most unnatural jumble of incongruities that ever was collected together."

We shall next give a few extracts from an interesting part of the chapter, where it is demonstrated by experiments "that, in the sunbeam, each individual colour of the chromatic series, as arranged upon the painted disc of the flower, denotes the evolution of a peculiar grade of temperature, in exact unison with that evolved in the same tints of the prism. The late Sir W. Herschel found that a delicate thermometer, placed in the violet ray of the solar spectrum, indicated an acquired temperature of 2° above the ambient atmosphere. The green exhibited an increase of 2·25°, and the maximum of temperature in the red ray amounted to 4·5833 Fahr." In verification of these facts, the author refers to experiments by which he discovered, from the degree of caloric that followed the formation of a peculiar colour, produced by the chemical union of different substances, "that each colour of the prismatic series displays, at the instant of its evolution, a corresponding and peculiar temperature. The results yielded, for violet, 1°; blue, 1·5°; yellow, 2·5°; and red, 7·5°, above the mean temperature of the substances employed for the formation of the different colours.

" I shall now give the temperature of various flowers, ascertained by a very delicate and sensitive thermometer, being the result of experiments made by me during the years 1822 and 1823. On a stage in the shade, the Richárd*ia* æthiópica was 55° Fahr.; the *R*ôsa odoràta, pale blush, 56°; and Amarýlli*s* Johnsôn*i* 57°. When the air was 54·5° Fahr., the Kérr*ia* japónica flòre plèno indicated 56°, and the double red anemone 57·5°. These exhibitions prove a temperature peculiar to each individual colour. From a numerous list of experiments I shall select a few, in the order of the prismatic series: —

White Flowers.

	Air.		
Sept. 9. 1822, at 6½ P.M.	53·5°	Daisy	52·5°
	60·	Bramble	59·5
May 21. 1823	58·5	Pond-weed	57·5
May 31., noon	81	Narcissus	80·5
July 24., 5 P.M.	66	Semidouble campanula	67·5

Blue Flowers.

	Air.		
May 21. 1823	54·0°	Blue bell	55·0°
May 30.	70·5	Blue iris	71·5
May 31.	75	Gentianella	77
July 24.	63·5	Bee larkspur	67 (sunshine.)

Yellow Flowers.

	Air.			
May 26.	60°	Leóntodon *T*aráxacum (Dandelion)	64°	sunshine
	63	do.	68	do.
At noon	70·5	do.	73	do.
	70·5	Goldenball[?]	73	do.
	82	Yellow-horned poppy	85	do.
July 24. 5 P.M.	57·5	Single yellow rose	61	do.

Red Flowers.

	Air.			
May 31., noon	81°	Double red pæony	89°	sunshine.
	71	Adònis autumnàlis	72	sun, clouds,
	73	do.	77	sun, bright
July 24.	54	Rose	58·5	Transient gleams.
	59	*L*ýchnis chalcedónica (scarlet lychnis)	61	

" White flowers do not differ materially in the heat evolved from them from the ambient air, either in sunshine or shade; and it is probable that they decompose less atmospheric air than flowers of other colours. The temperature of flowers is always higher than that of the surrounding air during sunshine, white flowers, perhaps, excepted. It is quite remarkable to notice the effect produced on them by even a cloud passing over the solar disc. In such circumstances, while the air was 71°, the flower of the Adòni*s* was only 72°; but on the returning gleam, the temperature rose 4°. The comparison between the air and flower was always made under similar circumstances."

From a detail of experiments made by Theodore Saussure, it appears evident that the inflorescence is more destructive of oxygen than the leaves. A beautiful reason is assigned for the sleep of plants, for the shutting of the corolla at night to preserve the parts of fructification from the cooling effects of radiation to a nocturnal sky, and for the similarity of colour that exists in flowers found in similar elevations and latitudes; but for these we must refer the reader to the work itself, as well as for a mass of other interesting facts. Among these we may notice a dissection of the leaf, and an analysis of the fluid contained in the pitcher of the *N*epénthes distillatòria, which throw much light upon the circulation of the sap; and also an able exposure of some modern speculations respecting life and motion, which the author calls " the most wild and visionary fancies that ever were promulgated." — *Scientiæ et Justitiæ Amator. King's Road, Chelsea, April* 26. 1834.

ART. II. *Catalogue of Works on Gardening, Agriculture, Botany, Rural Architecture, &c., lately published, with some Account of those considered the most interesting.*

FOURTH Annual Report of the Committee of the Royal Devon and Cornwall Botanical and Horticultural Society. Pamphlet, 8vo, 101 pages. Plymouth, 1834. 2*s*.

When we mention that this Report is drawn up by our correspondent, Dr. Hamilton, the honorary secretary to the Society, our readers will readily suppose that it contains some curious and interesting matter. There are remarks on promoting the comforts of cottagers, on the O'xalis crenàta, on collecting manures, &c., &c. Dr. Hamilton does not think, with us, that the tubers of the O'xalis crenàta are produced by the checking of the underground stolones from the decline of temperature late in autumn. "This," he says, "would be a very philosophic mode of accounting for the formation of these tubers, were it not that the plant is a native of a region to the south of the line, little elevated above the ocean, within the tropics, and where the lowest temperature does not descend farther, according to Humboldt, than 55° 4′ of Fahrenheit; and this at a season the reverse of that at which the tubers begin to appear with us. October, in Peru, corresponds with the vernal month of April on the north of the line; at which time the circulation of the sap is in full vigour, and the temperature of the year increasing, instead of diminishing: hence, unless we assume that the plant has altered its habits since its introduction into this climate, we must ascribe the late formation of the tubers to some other cause than the reduction of temperature checking the prolongation of the stolones, and causing an accumulation of sap in their extremities." p. 43.

The Flower-Garden, or Monthly Calendar of Practical Directions for the Culture of Flowers. By Martin Doyle, Author of "Hints to Small Farmers," "Practical Gardening," &c. 12mo, 170 pages. Dublin, 1834.

The aim of this work, like that of all those in which Mr. Doyle is engaged, is excellent; and though we do not think it calculated to be so useful as his *Practical Gardening*, still it will serve to spread a taste for flowers. The objection we have to the work is, that tender articles, florists' flowers, and plants that require extraordinary care, are not sufficiently marked out from those that require only ordinary care. Something, we think, should have been done to point out the beauty of wild flowers, and to mark out such of them as are known to be capable of great improvement by cultivation, and cross fecundation. It is of importance to impress on the mind of every man who has a garden or a field to cultivate, that nature gives only the rude materials, the sloe and the crab, and that it is for man to render them subservient to his purpose, to form plums and apples from them, by cultivation; and that cross fecundation is, next to abundance and concentration of nourishment, one of the most important points of culture.

The First Report of the Oxford Botanical and Natural History Society, established August 30. 1831; with the Rules of the Society, a List of Members, and a Catalogue of the Books in the Society's Library. Pamphlet, 8vo, 20 pages. Oxford, 1832.

The object of this Society is to promote the study of natural history in general; and more particularly botany and horticulture. This object it will endeavour to accomplish, 1st, by reading original communications, or extracts from useful and interesting works on these subjects; 2dly, by occasional lectures; 3dly, by the purchase of periodical and other books relating to these departments of knowledge; and 4thly, by the formation of a library, herbarium, &c., for the use of the members.

Donations of books, drawings, prints, specimens, &c., connected with natural history, from those who may wish to promote the object of the Society, will always be acceptable.

The rules are twenty-seven, the catalogue includes seventy distinct works, and the lists of presentations are considerable. Ten different periodicals are taken in. The terms of subscription are 10*s*. on entrance, and 1*s*. a month afterwards. Persons residing at a distance from Oxford do not receive books till they have been two months in the possession of the Society.

It appears from this pamphlet, that when we stated on the authority of Mr. Humphreys (109.), that the establishment of a garden library for the use of the Oxford gardeners was first proposed by him, we were in error. Possibly we may have misunderstood Mr. Humphreys.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

A Communication by means of Steam between India and England. — I hail with anxious impatience the establishment of this mode of communication, by means of which, seeds and plants will have a chance of surviving the transmission, beyond any thing they now possess, even under the most attentive treatment and greatest solicitude for their preservation. From my own personal experience, as well as from that of hundreds of others, I know that it is the *second* crossing of the equator which forms the most formidable obstacle in the way of prosperously conveying such objects as plants; but if the period of the voyage can be shortened to within little more than two months, safety, whether the line be crossed twice or not, will be almost certain. — *N. Wallich. Botanic Garden, Calcutta, Nov.* 22. 1833. [See IX. 83. for an abstract of Dr. Wallich's excellent precautions, advice, and practice, on transporting living plants from India. In the *Scotsman* of May 3. it is stated that the steam communication with India, by means of the Red Sea, has commenced; the Hugh Lindsay steamer having left Bombay, Feb. 1., and reached Suez, March 4.; a distance of 3400 miles in about a month. There is a regular steam packet between Falmouth and Malta, which makes the voyage in sixteen days, and all that is wanting is another steam packet between Malta and Alexandria, and this would bring the whole voyage from Bombay to London within two months.]

The Many-stemmed Mulberry (*M*òrus multicaùlis) is said to be greatly superior to all the other species and varieties in the number of leaves which it produces, as well as in the quantity of nutriment which these leaves contain. Plants may be obtained from M. Guérin, at Honfleur, near Havre, and from M. Soulange-Bodin, at Fromont, near Paris. (*L'Agronome*, vol. i. p. 187.)

The fragrant-flowered Variety of Cýclamen pérsicum. (187, 188.) — I may say that we have now a small plant of this variety, with about a dozen flowers, which completely scents a large room. It is possible, however, that Mr. Turner (188.) is right with regard to his plant, for I have some idea that the pérsicum which we had some years since had *no scent*, and that I purchased the parent of the present plant on account of its perfume.—*F. L. S. May* 2. 1834.

If F. L. S.'s idea, that the flowers of the parent of his present plant were also fragrant, be accurate, we learn from it that the fragrance of the flower is, in this variety, hereditary. — *J. D.*

Art. II. *Foreign Notices.*

GERMANY.

The Gardens of General Vandamme at Cassel are celebrated. The general halted one day at the castle of Prince Pückler-Muskau, in Silesia, and talked a great deal to him about his house and gardens. "Among other things, he stated that the whole garden was surrounded with iron railings of different patterns, all of which he had taken out of German churches; and that his cellar was not badly filled with wine, also out of German convents." Curiously enough, the prince was afterwards of a party that took Cassel. "I had then," says he, "an opportunity of satisfying my curiosity about Vandamme's pleasure-grounds. I found all exactly as he had told me, but suffered no reprisals to be made upon him; only I had one old wine cask, on which was written, in great letters, *Aus dem Kloster Mölk*, brought out of the cellar into daylight, and divided it among my men." (*For. Quart. Review*, May, 1834, p. 392.)

AUSTRALIA.

Hobart Town, Van Diemen's Land, Oct. 11. 1833. — "Among the valuable seeds and plants introduced into the colony by Mr. Sams, recently returned to us by the Indiana, are two from the Mauritius, indigenous to that island; namely, the Mowrung and Telfaíria, the latter named after Mr. Telfair, the late eminent botanist and scholar of that place. The Mowrung is a most beautiful quick-growing plant, bearing a pod of about 5 or 6 in. in length, filled with black seeds about the size of a small bean or large pea. In its young state, the leaves and pods, and also the roots, are eatable, it thus proving a most useful and palatable esculent. Should it thrive in this island, which, with the care usually bestowed by Mr. Davidson of the government garden, in inuring plants of similar latitudes to the climate of this place, and the great success already attending his exertions, it may be expected will be the case, it will ultimately prove a valuable acquisition to the colony. The Telfaíria is also a diadelphous plant, bearing a seed about the size of a kidneybean, covered with a reticulated skin, and climbing up any supporter to a towering height. Both plants have been recently introduced into England.

"A new species of Eucalýptus was lately discovered by Mr. Backhouse, in the course of a journey that gentleman made to Mount Wellington. It is a stately tree, resembling the stringy bark, or E. robústa; and grows in abundance near the highest range of forest vegetation at the foot of the perpendicular basaltic columns, with a seed-vessel resembling in shape a Grecian urn. All along the same place the beautiful mountain-grass tree with its elegant white spikes is now in full bloom, covering the whole space around. This species of Xanthorrhœ'a is different from, and still more elegant than, the Risdon grass tree, so common in sandy places on the Richmond side of the river. Persons fond of ornamenting their gardens with the beautiful shrubs and flowers of this island should not be deterred from transplanting them, under the apprehension that they will not bear removal from the shady situations in which so many of the most elegant are found; for, when carefully removed with the sward, so as not much to disturb the roots, and watered for a few days, they will often thrive to admiration, shooting their roots with facility through the pulverised and loose soil of the garden.

"Mr. Sams, we have great pleasure in stating, besides the very valuable collection of plants which he has brought out under his own care, and those which he formerly sent while in England, has established, under the sanction and patronage of the queen, a regular communication with Mr. Aiton of the royal gardens at Kew, from which he will, from time to time, receive such as are still wanting in the colony, and will send home, in return, such indigenous seeds and plants as, from their beauty or rareness, deserve to be brought under the notice of the intelligent English botanist." (*Hobart Town Courier*, Oct. 11. 1833.)

Art. III. *Domestic Notices.*

ENGLAND.

The Botanic Garden, Oxford, seems destined to undergo considerable improvements. Dr. Daubeny, immediately on being elected professor, had a plan engraved of the garden as it is, and another plan indicating extensive additions and alterations. The additions are, chiefly, the proposed use of the space without the walls (mentioned p. 110.), which had hitherto been turned to little account; and the alterations are, chiefly, turning the western division of the garden into a place for displaying the natural arrangement, and erecting two green-houses. The plans have been kindly sent to us by Mr. Baxter, and they are accompanied by an Address, dated March 14th, from Dr. Daubeny, to the President and Fellows of the Royal College of Physicians in London, by whom he was elected. From this Address we make the following interesting extract: —

"The Physic Garden comprehends a space of nearly five acres of ground, of which, however, only three are enclosed within walls, the remainder lying chiefly betwixt the latter and the river Cherwell. Its contiguity to the water has at all times rendered the situation subject to damp; but the most serious evil incident upon such a locality, namely, the liability to flooding, seems now to be removed, owing to the large quantities of new soil which have from time to time been introduced, and which have raised its general level considerably. Neverthless, as that which is brought in has not always been of a good quality, the addition of many fresh loads of soil, of a better description, seems even at the present time to be required, for the sake of the plants therein cultivated.

"The whole of the space within the walls has hitherto been applied to the elucidation of the Linnæan system, the eastern division being chiefly occupied by British, the western by exotic plants, arranged after that method. The increasing interest, however, felt in the present day for the natural method of arrangement, seems to render it desirable that this latter half should henceforth be set apart for its illustration: but, in order to accomplish this, it will be necessary to gain some additional space, which can only be done by removing the double yew hedge that traverses the centre of the garden, and which has long been regarded as objectionable from harbouring vermin.

"The space without the walls has hitherto been turned but to little account; but it seems desirable that, in future, a portion of this ground should be devoted to plants employed in medicine, agriculture, or the arts: the former being enjoined to be cultivated in some part of the garden by the original framers of the statute relating to the Sherardian Professorship; the latter being particularly insisted on in the will of that munificent benefactor to the establishment, the late Professor John Sibthorp.

"The remainder might be made available for the purposes of an Experimental Garden, for ascertaining the effects of soils, or of chemical agents, upon vegetation, and for other researches of a similar description.

"The only means which we possess at present for the cultivation of aquatic plants being a few narrow cisterns, or tanks, lined with copper, which are placed at the farther extremity of the garden, a basin of considerable size seems a desideratum, for which the centre of the space enclosed within the walls would afford a convenient site.

"The houses existing at present for the reception of exotics are as follows: A stove-house, 30 ft. long, 14 broad, and about 12 in height, very badly constructed, having glass only on one side, and much out of repair. Two green-houses, each 30 ft. long, 10 wide, 14 ft. in height in front, but only 10 at the back, extremely ill-constructed for most kinds of plants, and likewise in very bad repair. Lastly, a green-house, in the centre of the western division of the garden, without any glass on the top, and very indifferently supplied with light from windows in its southern front. It is 66 ft. long, 13½ in height, and in the centre 22 wide, narrowing at the sides. These houses were erected about a century ago, at a time when the mode of constructing green-houses was but ill understood, and when the cultivation of hot-house plants was almost unknown. The decayed condition of the frames, timbers, &c., involves a considerable annual expense; for it would appear, taking an average of the last five years, that no less than 60*l.* per annum is required for keeping these and the other buildings connected with the establishment even in their present condition.

"Up to the period of the erection of the new bridge over the Cherwell, near Magdalen College, a house had been kept up for the professor of botany, who is indeed expressly enjoined to reside, if possible, at the garden. In the year 1795, however, the improvement of the approaches to the bridge occasioned the pulling down of the house, and one of the green-houses was then converted into the purposes of a library and lecture-room, which is consequently now the only apartment of which the professor can avail himself, whether for the purposes of private study or of public instruction. This room is of the same size as the largest of the green-houses already specified, and serves as the depository both of the library and the herbarium.

"The library consists of about 1900 volumes, comprehending the valuable and curious collection of botanical books presented by Consul Sherard, consisting of about 600 volumes; that originally belonging to Bobart, one of the keepers of the garden, and probably others, which may be estimated altogether at about 280 volumes; the library of Dr. John Sibthorp, amounting to about 750 volumes; and the remainder bequeathed by the late Professor Williams, or given to the Sherardian library by his executrix. The books appear in many cases to be suffering severely from damp, owing to their having remained for many years at the farther extremities of a room heated by only a single fireplace at its centre. The library also contains a most valuable and extensive series of dried plants obtained from various quarters; amongst the donors of which I may specify Dr. Morrison, who first held the professorship, and Consul Sherard, who endowed it, and whose Herbarium alone is said to contain 12,000 specimens: there is also a collection, occupying no less than 72 folio volumes, purchased of Mr. Charles du Bois by the first Professor Sibthorp; one by Professor Dillenius, intended to illustrate his *Muscologia;* another very extensive one, presented by Lord Macartney; and a small but nicely arranged series of plants made by Dr. Thomas Shaw, the traveller, in Barbary, Greece, and Egypt, and referred to in his work. To these I shall have to add, a large Herbarium accumulated by the younger Dr. Sibthorp in Greece and Turkey, one presented by the East India Company, and another of Australian specimens, which have hitherto been deposited, for want of proper room, in the Ratcliffe library; my own collection, illustrative of the natural system, which, being chiefly made at Geneva, is richest in Swiss plants; and another, of British ones, presented by the Rev. R. Walker, author of the Flora of Oxfordshire. There is also a collection of minerals, shells, and corallines, made by that indefatigable naturalist, the author of the *Flora Græca.*

"The only other building which need be noticed is the gardener's house, the bed-rooms of which are damp and unhealthy, from being placed on the ground floor contiguous to a stagnant ditch. The rooms are also all of them extremely confined, and especially the gardener's own private study.

"From the above statement of the present condition of the establishment of the Oxford Botanic Garden, it will appear that the most pressing want is that of better houses for stove and green-house plants, the present ones, and especially the stove-house, being not only too confined, but also so miserably constructed, that all hopes of cultivating rare and curious exotics, as is usual in other public gardens of the same description, must be abandoned, until better are obtained. I think, too, that a mere reference to the large annual expense of maintaining them, even in their present imperfect state of repair, will make it appear that the most advisable, as well as, eventually, the most economical plan, would be that of pulling down all, except the principal central green-house, to the ground, and erecting new ones in their place.

"Considering, also, the extent and value of the present collections; the probability of future additions; the difficulty of rendering them so extensively useful as it is to be wished they should become, whilst crowded within the present narrow limits; the circumstance that, by the will of the late Professor Sibthorp, no less than 100*l.* a year is expressly directed to be applied from the proceeds of his estate to the purchase of books, so soon as the *Flora Græca* shall have been completed; and the injury sustained by these, as well as by the dried plants, in consequence of the necessary application of the present library to the purposes of a lecture-room; I feel strongly impressed with the necessity of erecting, with the first money that can be raised, after that provision which seems indispensable for the plants has been made, one additional room at the least for the reception of books, and a small private study for the professor, both on the first floor, having underneath suitable offices for a servant, who should take charge of the apartments and their contents.

"The particular mode in which these several objects may best be secured will, of course, remain open for farther consideration; but it may be suggested, that the new building required might stand in the place of the old green-house now adjoining the library, having its front towards the High Street, projecting about 10 ft. beyond the Danby Gateway, from which it would be separated by a interval of about 10 ft.; whilst on the opposite side of the latter a new green-house of a better construction might be substituted for the present one, a uniformity of appearance towards the street being kept up by adding some rooms at the back with a corresponding frontage. If this were done, I would suggest appropriating the room so obtained at the back of the green-house as a depôt for the seeds, roots, and dried plants; the ground-floor being partitioned off, in the manner shown in the plan, into several small rooms for the two former, whilst the upper story constituted one entire gallery for the reception of the valuable Herbarium. In the event, however, of any arrangement being made with the street commissioners, by which the ground represented in the design as in their occupation should be secured for the purposes of the botanic garden, a better plan would seem to be that of erecting the new apartments at the back of the present library, with a frontage towards the High Street; by which means the necessary accommodations would be obtained, without any corresponding building being required on the opposite side of the Danby Gateway for the sake of uniformity. With respect to the large green-house in the centre of the western division of the garden, I conceive that it might be made more suitable for the purposes for which it was designed, if the present roof were removed, and a skylight were placed in its stead; or even in its present form, though nearly useless for plants, it might be made serviceable as a lecture-room. The two additional houses I would recommend to be erected are, one for green-house plants on the western side of that last alluded to, of the dimensions stated in the plan, and a corresponding building on the eastern side of the library for stove plants, in lieu of the present one, which I should then recommend to be pulled entirely down. Lastly, the gardener's house might be improved by an addition to the size of the little study on the left, and by erecting another story in which sleeping-rooms might be placed.

"The liberal donation of 500*l.* three per cent consols, which the executrix of the late professor has intimated her intention, in compliance with the wishes of her late brother, of contributing to the garden fund, will enable me, should these views meet with the sanction of the garden committee, to accomplish some part of the objects above pointed out; but, for the fulfilment of the remainder, I must chiefly depend on the contributions of the respective colleges and of their individual members, together with those of others, who, it is hoped, may feel disposed to place the botanic garden more nearly on a par with the other public establishments of this university, and who may desire to render it better adapted to the demands of modern science, more adequate to the supply of that information, with respect to the properties and uses of plants, which by the new medical statute every candidate for a degree in physic in Oxford is expected to acquire, and more nearly corresponding to the scale on which in other universities such institutions are at present conducted."

A Committee has been named, of which Dr. Daubeny is one, and a subscription commenced, to which various sums have been put down, from 1*l.* to 100*l.*

The Sheffield Botanic Garden.—The two plans for laying out this garden, which received prizes, have been sent for our inspection, and we have been very much gratified by examining that of Mr. Marnock. The second best plan (by Mr. Taylor, an architect), though neatly drawn, and displaying considerable taste for picturesque beauty, is yet altogether unfit for a garden of culture. It is no disparagement to Mr. Taylor's talents as an architect, to say that he is not also a gardener. The care and attention with which Mr. Marnock has gone into the subject, and the provision which he has made for every description of culture, evince a mind deeply imbued with knowledge of his profession; and we should not be surprised if this garden should ultimately be one of the first, in point of completeness of arrangement, in the kingdom.

In thanking the Committee for having authorised Mr. Marnock to send us the plans, we beg to congratulate them on their having met with so able a curator.—*Cond.*

A Society for encouraging Cottagers in the Cultivation of their Gardens has been established at Trimley in Surrey, chiefly, we believe, through the exertions of Mr. Lance, the author of the *Cottage Farmer.—Id.*

Dropmore, it is said, has been described, and illustrated with beautiful engravings, in a work prepared under the direction of the late Lord Grenville a short time before his death, and now printing for private distribution. We hope some friend will procure us the sight of a copy.—*Id.*

The Pantheon Bazaar, Oxford Street, for the sale of plants, &c., mentioned p. 160., is now completed. It well merits the attention of the commercial florists and nurserymen in the neighbourhood of the metropolis; and we hope it will at once serve as an outlet for a large portion of their produce, and as a school for promoting a taste for flowers.—*Id.*

Several Plans of Conservatories and other plant buildings have lately been shown to us by Mr. Wm. Crosskill of the Beverley Foundery, constructed almost entirely of cast iron. Considering the quantity of metal employed in pilasters, architraves, cornices, &c., we were surprised at their cheapness; but we were most gratified by a mode of giving air by the sympathetic and instantaneous movement of valves. There is nothing new in the idea of doing this, but it is seldom that we find it successfully carried into execution on a large scale. The floor of a conservatory erected by Mr. Crosskill, for R. Bethel, Esq., M. P., at Rose Park near Beverley, is entirely paved, with the exception of openings 10 or 12 ft. apart every way, in which standard trees are planted. Over the circle or square of earth round each tree, there is a cast-iron grating, in two pieces, so as to fit into each side of the stem, for the purpose of admitting air and water to the soil. In consequence of this arrangement, every part of the conservatory may be used as a drawing-room, or promenade, like the winter gardens of Berlin. (V. 251.)—*Id.*

The Broad Walk in Kensington Gardens is now (April 30th), after these genial rains, being harrowed up with Finlayson's harrow drawn by six horses. After the gravel has been hand-picked from large stones, and made even with rakes, it will be rolled by a very heavy horse roller, and will require no more attention, except once or twice rolling, for a year or two. This may afford a hint to gardeners, for the management of approach roads, where they are of great extent.—*Id.*

Mr. Samuel Currie, gardener at Stanley Hall in the neighbourhood of Wakefield, has lately left England with a view of establishing himself as a market-gardener at Washington, in the United States. We have no doubt of his ultimate success.—*Id.*

The Great Cherry Tree of Withermarsh Green is the name applied to a cherry tree now growing on Withermarsh Green, in this parish (Stoke Nayland, Suffolk), and this name I consider it well entitled to hold; as, among a vast number of its kind, which are to be found in this and the adjoining parishes (it being quite a cherry district), I have never seen one worthy of being compared with it, either as to size or beauty. It is of the kind which produces the small red cherry. Several of the lower branches have been, at different times, lopped, and others have been injured by cattle, or they would long ere this have nearly reached the ground. The height of the tree, from the ground to the tip of the upper boughs, is 46 ft.; the girth of the trunk, at twelve feet from the ground, is 9 ft.; the girth of the three principal arms, near the trunk, is about 5 ft.; the spread of the branches, from north to south, is 74 ft.; the spread of the boughs, from west to east, 62 ft.—*J. D. Hoy. Stoke Nayland, Suffolk, Feb.* 11. 1834.

There is scarcely a lovelier object than a cherry tree in blossom. The leaves are yet absent, and every branch a rich wreath of snow-white graceful blossoms. What a feast to the eye and to the heart it must be, to pass through the cherry district above spoken of early in May!—*J. D.*

Cèdrus Deodàra *Rox.* — Dr. Wallich, of the Calcutta Botanical Garden, has sent us some seeds, for distribution, of this very interesting tree. His letter is dated Nov. 22. 1833. He speaks of the seeds as, then, received "about a fortnight ago from Kumaon," and expresses his hope that they may reach us in a vegetative state. He adds:—"Those which I have sowed here have come up in ten days from the time they were put into the ground. Contrary to my express orders, they had been taken out of their cones before being forwarded to me from the hills; but I expect ample supplies of fresh and good cones, of which I will send you a proportion. There is in the box, also, a phial of seeds, of

"*The White* Nelúmbium *speciòsum*, a most lovely flower, more lovely to my eyes, than the pink-coloured one."

We received the seeds on May 12. 1834. Those of the Cèdrus *Deodàra*, in four sealed phials, were all devoid of life, and some of them nearly rotten. A white mould was obvious among the seeds towards the necks of the vials, where it coated, also, the end of the cork, and, partially, the inward face of the phial. The source of this may have been some fermentation among the seeds themselves; the dampness of the cork when put in; or some dampness which it had acquired subsequently. The oily matter which surrounds the embryo in the Coníferæ, and is plentiful in the seeds of this species, had partially come through to the surface of the seed, and appeared in blisters under the integument. The embryoes (polycotyledonous) were flaccid and yellow. Just for the chance of any one of the numerous seeds growing, we have sowed them ourselves: had they been perfect, we should have sent them, as Dr. Wallich wished, to various cultivators.

Since the above was written, we have received a small quantity of the deodar seeds from Mr. Auben of the East India House, sent by direction of the Chairman of the Company. These seeds are in quite the case of those above named, but drier. Along with them, Mr. Auben forwarded extracts from letters from Dr. Wallich; one of which we quote:—"The deodar cedar is, of all others, the most desirable to introduce into England. It is equal in stateliness and magnificence to the Lebanon cedar, and far superior to it in the fragrance of its wood, which is incredibly durable. The tree will stand the climate of the North of Europe, beyond all doubt." Dr. Wallich, besides again noticing that the seeds had germinated with him in ten days in the open ground, has added, "and under glass, in my own room, in eight days."

The seeds of the *Nelúmbium*, twenty-two in number, we have distributed in pairs to Mrs. Lawrence, Mrs. Marryatt, Messrs. W. Young and Penny, Loddiges, Low, Knight, Campbell, Bevan, Baxter, and Allcard; and C. A. Fischer, Göttingen.

Our friend, Dr. Wallich, remarks that seeds, roots, or growing plants, of all rare species, exotic to India, and especially of South American species, will be always welcome to the botanic garden at Calcutta; and we hope that some of the friends named above will be able to contribute, at least in some degree, to the gratification of Dr. Wallich's wishes.

Two Specimens of Brompton Stock, the one red and the other white, have been sent to us from the garden of Mr. Cullen, of the Brown Bear, Greenhithe, of extraordinary luxuriance and beauty. The principal spike of flowers on the red stock is a foot in length, and it is surrounded by twelve others, varying in length from 9 in. to 6 in. The number of flowers fully expanded on the central spike is twenty, not one of which is faded; and there are nearly as many on each of the twelve side spikes. Most of the flowers are upwards of an inch and a half across. The central spike of the white stock is 14 in. in length, and there are thirty flowers on it fully expanded, and many of them above 2 in. across: nine of the lower flowers have thrown out secondary flowers or spikes from their centres; and it is evident that all the flowers on this spike have a similar tendency. There are only two side spikes to this white stock, each with about 15 flowers fully expanded. The leaves are upwards of 9 in. in length; those of the red stock are not quite so long. The stem of the white stock, in the thickest part, is three fourths of an inch in diameter; that of the red rather more than half an inch. The total height of the red stock from the ground is about 2½ ft., and that of the white 2 ft. Had we received these flowers in time, we should have sent them to the Horticultural Society's exhibition. When at Greenhithe, May 6., we were shown some very fine Brompton stocks in the garden of Mr. Wilson the surgeon there; and a purple Brompton stock in the garden of —— Foster, Esq., covered with bloom, which Mr. Foster assured us had remained in that state, summer and winter, for upwards of two years. It formed quite a large shrub.—*Cond.*

ART. IV. *Calls at Nurseries and Suburban Gardens.*

VAUXHALL Nursery, Messrs. Chandler and Son. — *April* 26. In the show house, we found a very splendid display, more especially of hybrid rhododendrons, Ghent azaleas, Azàlea índica Smíth*ii*, Cape heaths, and acacias and other plants from New Holland. The plants in the other houses were, as usual, beautifully grown, and in excellent order. A few camellias and Magnòl*ia* Soulange*àna* were still in bloom on a wall with a western exposure; and the pelargonium-house was in an advanced state, some of the varieties having already expanded their flowers. There was a rich collection of tree pæonies in the open air, showing great abundance of bloom; which, however, from its advanced state, and the cold east winds so long prevalent, will, we fear, not expand freely. The appearance of Magnòl*ia* Soulange*àna* here, and at Brown's Nursery at Slough, induces us strongly to recommend that variety as coming into flower later than conspícua, purpùrea, or grácilis, as being more agreeably scented than any of these, and as being much hardier. Messrs. Chandler have a number of plants, the evergreen American varieties of that beautiful genus *Bérberis;* ultimately these varieties will find their way into every collection. From one species they have raised young plants, from seed ripened in their own nursery.

Mr. Groom's Tulip Show commenced April 26., but, owing to the severity of the weather, the flowers were not so far expanded as it was expected that they would be. On the whole, however, they promise well. Mr. Groom's pelargoniums are remarkably well grown this season; and he has also a stock of Fùchs*ia* longiflòra; which was lately advertised by the original grower, as having a flower 6 in. long! Mr. Groom has also a large stock of *M*ímulus Smíth*ii*. Both here, and at Mr. Chandler's, it is found a great advantage to this plant to set it in a pan of water.

The Surrey Zoological Gardens are continually undergoing improvement in a gardening and architectural point of view, altogether independently of the valuable zoological additions which they are always receiving. Among the latter was a young rhinoceros. These gardens now include 15 acres, besides some exterior paddocks, which are available for the uses of the animals. We are happy to find that almost all the trees and shrubs in the arboretum here are named on tallies 3 or 4 ft. high, so that they do not require the spectator to stoop, nor are they liable to be hidden by the leaves or branches. Mr. Watts, who is now the head gardener here, has a just idea of what ought to be done, and is filling the gravel walks to the brim, and softening the outlines of the dug masses. In the grand dome is a most ingenious portable apparatus for heating by hot water, invented by Mr. Morgan, which we intend to give an account of in an early Number.

Colvill's Nursery. — *April* 28. A splendid show of forced flowers and shrubs, and various articles in flower in the hot-houses and green-houses. Some standard tree roses, varieties of the *R.* índica, in pots, were covered with bloom, and were very brilliant as well as fragrant. These roses require very little forcing, compared with the common Provence rose; and, when this is generally known, and the new fragrant varieties are spread over the country, rosebuds at Christmas will be common in every village.

The Chelsea Botanic Garden looks, as usual at this season, remarkably well. We found our excellent friend the curator as busy as ever, and as happy as a man can be who enjoys good health, a clear conscience, and a competent income, and who is fully occupied in a pursuit altogether to his taste. He pointed out to us a row of the different varieties of *S*cílla non scrípta, which were planted by the late Mr. Haworth the day before he died; a Windsor pear, grafted on a quince stock in a cankered state, and beside it a St. Germain pear on the same kind of stock, very healthy; which would seem obviously suggesting, as Mr. Anderson mentioned, the idea, that, to dwarf the Windsor pear, it must be grafted on some other pear, which had been previously grafted on a quince stock and had thriven. Mr. Anderson has turned out against his walls a number of New Holland shrubs, which, in the dry sandy soil of the Chelsea Garden, may probably live through the winter. We saw several new alpines, and some new hardy trees and shrubs from Nepal and Peru.

Exotic Nursery, King's Road. — Mr. Knight is erecting some new plant houses and pits, some of which are being heated by Mr. Weeks, on a new and ingenious plan. Three pits or small houses will be heated from one boiler at one end; either all three at once, or two, or one at a time, as may be considered desirable.

A considerable importation of plants from China has been sent to Mr. Knight, by J. Reeves, Esq., F.H.S., &c., of Clapham, which is expected to contain several new species. — *Cond.*

On May day we had a pleasant stroll through Mr. Knight's houses, in company with the most able foreman, our very intelligent friend, Mr. Alexander Scott. The more mentionable of the plants which we therein saw belong to the orders *O*rchídeæ, *E*ríceæ, *R*hodoràceæ, Leguminòsæ, and Prote*àceæ*.

Mr. Knight's collection of tropical *O*rchídeæ is becoming eminent; for, in addition to his original stock of these plants, and to his having added to it, by purchase, the stock of W. Cattley, Esq., he has farther added to it, by purchase, so lately as February last, the collection of the deceased Mrs. Arnold Harrison. The relatives of this amiable lady had found her favourite plants but a painful and ever-present remembrancer of their bereavement, and so resolved to remove them from their sight; and Mr. Knight has become the fortunate possessor of them. Mr. Richard Harrison has, however, still a fine collection of *O*rchídeæ. Mr. Scott has given us the following outline of the contents of the collection lately Mrs. A. Harrison's: — " It is rich in the tribe *Vándeæ*, which is eminently occidental. There are species of the genera Oncídium, Stanhòpe*a*, Zygopétalum, Gongòr*a*, Corysánthes, Catasètum, Maxillària, Bifrenària, Acrópora, Peristèria, &c. In the tribe Epidéndreæ it is also rich in species of the genera Brassavòl*a*, Cattlèy*a*, Epidéndrum, Blèt*ia*, &c.; and in the tribe Malaxídeæ, in species of the genera Pleurothállis, *S*tèlis, Líparis, Cœ'lia, Pholidòta, Cœlógyne, Bolbophýllum, E'ria, Dendròbium, &c. Among the small flowering kinds, there are species of Sauroglóssum, Neóttia, &c. The collection lately Mrs. A. Harrison's includes about 160 named or known species; and there are, besides, several which have not yet flowered in this country." The plants of this part, and of the whole of Mr. Knight's *O*rchídeæ, are looking in satisfactory health and growth, although Mr. Knight believes that the stove at present assigned to them is not every way congenial to their welfare, and is, in this belief, now having built a new one, which he conceives will be more so. This enterprise cannot fail to earn its own reward, nor, we trust, to produce the excellent effect of promoting greatly the institution of collections of *O*rchídeæ among Mr. Knight's customers and visiters. Only very few of the species are now flowering: Maxillària aromática, with its rich yolk-of-egg yellow cinnamon-scented flowers, is the most pleasing of these.

In *E*ríceæ & *R*hodoràceæ, the following plants are noted in our memoranda. The two well-known often-mentioned trees of *R*hododéndron arbòreum are bearing heads of their lovely flowers, although fewer of these than they have, in some seasons, produced. Upon one tree the flowers are somewhat smaller, and are grouped into denser heads than are those upon the other. The corollas of the two trees are not of the same colour, although both are of the variety called the scarlet-flowered tree rhododendron. Mr. Scott showed us, also, one or two plants of the pink-flowered tree rhododendron, and of the white-flowered tree rhododendron. Of the scarlet and pink flowered varieties, plants are here on sale; but those of the pink-flowered are yet high-priced. The last of the flowers (beautiful, indeed, they are!) of the *R.* campanulàtum were now falling. They had been in perfection in the second week in April; and as many as thirteen had been counted in a head. This exquisitely ornamental plant (see IX. 485.) is asserted to be nearly hardy in Britain: it is from Nepal. Mr. Knight has a store of seedling plants of it. A few hybrids of the *R.* póntico-arbòreum kind were placed in the ranks of the plants in the conservatory; and, though "hybrids," as some would reproachfully term them, were ornamental in their heads of pretty blossoms. In a frame were plants of those interesting dwarf species, *R.*Chamæcístus, lappónicum, and chrysánthum. The plants of *R.* Chamæcistus were flowering rather freely: their pale delicate corollas, large for the plant, are very pleasing. In this frame were also a plant of the white-corollaed Menziès*ia* *p*oliifòlia, from Ireland; plants, in flower, of the M. cærùlea, from Scotland; and of the Chamælèdon (Azàlea) procúmbens, also from Scotland, and in flower. Of azaleas in the houses, the most superb was a plant of the A. *l*edifòlia (índica álba). It was more than a yard high, its branches spread almost 4 ft., and the large white corollas well-nigh touched each other over the whole of the upper part of the plant. The flowers give out, too, a pleasant delicate odour. Of A. sinénsis we saw some last flowers. There is a peculiar beauty in the colour of the corolla of this species. Of A. índica, purple-flowered, double, two plants bore flowers. The rarer Chinese kinds of Azàlea, introduced by Mr. M'Gilligan (IX. 474.), are, we learned, doing very well; and that plants of them, for sale, at moderate prices, are expected to be ready in autumn.

In Leguminòsæ the most beautiful of the plants in flower (except the Wistàr*ia* Consequà*na* within the conservatory, and one in the open air) was Kennèdy*a* dilatàta: it is a lovely green-house twiner. The other plants we noted are, *A*càcia pentadènia *Lindl.* and cordàta, Oxylòbium retùsum, Gastrolòbium retùsum, Pultenæ'*a* villòsa, and Adésmia viscòsa: of the last, a plant 10 ft. high, has stood out through the winter, unhurt, trained to a western-aspected wall. Of the Leguminòsæ raised by Mr. Knight, from seeds collected by Mr. Baxter, the following are the names of some: — Gompholòbium venulòsum, capitàtum, Knight*iànum*, ténue; Burtòn*ia* conférta, Dillwýn*ia*? glycinefòlia, Chorózema ovàtum, Scótt*ia* læ'vis, and some others.

In Prote*àceæ* the foremost objects are two blooming plants of Telòpea speciosíssima, each more than 6 ft. high, topped by striking (as Telòpea signifies) heads of flowers. The stock of plants of banksias and dryandras raised from Mr. Baxter's seeds has been much reduced by sale; those left are looking well, and amongst them we were shown plants, two or more, of the rare Hemiclídia Báxteri. Bánks*ia* Goód*ii*, raised here, is dead, and is, therefore probably lost to Britain.

Of other plants noticeable (without mention of the orders to which they belong) are the following: — Pergulària odoratíssima, whose fragrance perfumed the stove in which it, with the Orchídeæ, grows; Sóllya heterophýlla in the open air, wholly unscathed by the past semblance of a winter, abounding in deep green leaves, and showing buds of countless blossoms which will adorn it through the summer. Cephalòtus follicul\àris; Dionæ'*a* Muscípula, plenty of; and *A*splènium Nídus; Aponogèton distàchyon, Begòn*ia* *h*eracle*ifòlia*, Pitcaírn*ia* álbiflos, and Lantàna Séllo*i* in the stoves: and, in other compartments, these: — Anthocércis littòrea, Boròn*ia* serrulàta, Sarracèn*ia* flàva, *Ribes* speciòsum, Gerárd*ia* *q*uercifòlia, Sparáxis grandiflòra, Alstrœmèr*ia* oculàta, *H*yacínthu*s* amethýstinus, Fúnk*ia* Sieboldt*iàna*, *Ph*lóx vérna, Prímula pusílla, Zappà*nia* nodiflòra var. *r*òsea, and Tríllium grandiflòrum. — *J. D.*

Dennis and Co.'s Nurseries, Chelsea, May 8. — The grounds in the King's

Road present an improved appearance. Numerous beds have been formed, and several of them furnished with a somewhat extensive stock of hardy bulbous plants. No kinds of plants are capable of contributing more to the interest and beauty of the hardy flower-garden, and yet we know not that any one professedly cultivates a collection of them for sale; we are glad that Mr. Dennis seems to purpose to do this henceforth. A considerable aggregate of species and varieties of the following genera are already obvious in the beds:—*N*arcíssus, *L*eucòjum, *S*cílla, Muscàri, Fritillària, Erythrònium, *Tùlipa*, Amarýllis, and *L*ílium. A contribution towards a collection of irises, as well the creeping root-stocked species as the bulbous, is also apparent. Alstrœmèr*ia* pulchélla has here, in the free soil, without any protection, exhibited growing verdant herbage, undestroyed by frost through the past winter; while that of A. *Pelegrìna*, growing beside it, has been destroyed by frost more than once. A collection of florists' tulips, in three beds, one of the beds under an awning, is now blooming: they are very beautiful, and among them are choice kinds. A bed of about forty strides long has been made, in a comparatively shaded part, of heath mould, and planted with plants for stools of the choicer varieties of hardy azaleas; these have been layed: some of the little intervals in the bed have in them herbaceous plants which love heath mould: Helònias bullàta is one of these. In pots, in gentle hotbeds, the choice Chinese asters have been advanced, in the hope of gathering from them well-ripened seeds in the autumn. In two beds of plants of Clárk*ia*, some of the plants are showing flowers: the whole from seeds sown, probably, as those of many annual plants should be in October of the previous year.

In the nursery in Grosvenor Row, we noted as follows:—The pelargoniums, in their numerous varieties, and an extensive stock of them, are looking in just the youth of their beauty; they will not be fully blown till June. We asked for the names of a few of the *now* most esteemed varieties, and gained the following:—Ne plus ultra, Jack of Newbury (this is of a compact habit of growth), Admiral Napier (its flowers are splendid), Smith's magniflòrum, diadématum, Adansòn*i*, concéssum, nonpareil, Weltjio*ànum*, Master Walter, Clarissà*num*, fúlminans, olýmpicum. Among the unpublished seedlings, three possessed of surpassing qualities are in flower; one of these, which is to be called Dennis's perfection, is in the mode of Smith's magniflòrum, but its petals have a fine purple tint, and they form a rounder flower. Some tiny youngsters, but a few months old, from seeds, are under culture; in the hope, doubtless, of their surpassing, like some of their precursors, all others known before them. Of heartseases, now adopted into the florists' affections, and named distinctively in their varieties, Mr. Dennis cultivates a collection: several of the kinds are in bloom, and are beautiful. The following names are those, Mr. Dennis has told us, of desirable kinds:—Invincible, Bang up, Jessica, Prince George, Sol, Pamela, Orestes, violàcea, Maid of Athens, John Bull, Appleby's William the Fourth, Lydard's William the Fourth, Lady Bath, Painted lady, Allen's Adelaide, Kentish hero, Crimson bícolor, Lilac major: of these we were struck with Bang up (what an elegant name!) and Pamela. Of additional names told us here, and at Mr. Hogg's, Paddington, these are some:—Achilles, Othello, Reform, Sailor boy, Hill's butterfly, Bunney's Queen Adelaide, and Ajax. Of the varieties of georginas, a most extensive stock of young plants is provided, for supplying the orders of the season, and for planting out in the King's Road Nursery for display in autumn. Some of the kinds already show flower-buds, and one kind, The Maid of St. Leonard's, has a flower expanded. Of the objects which, in the general collection, came under our eye, we name the following:—Plants of Cèreus spléndidus (see p. 237.): of Peréski*a* *Blèo*, of several gloxinias, of *Ribes* speciòsum, three fine plants of *R*hododéndron Russelli*ànum* just going out of flower, *M*ímulus Smíth*ii* flowering; Prímula cortusö*ìdes*, a group of; a stock of plants of Lobèl*ia* speciòsa, purpùrea, fúlgens, spléndens, cardinàlis, and of a scarlet-flowered new variety, in the way of cardinàlis, but with its inflorescence much branched. We shall add, because they interest us, Symplocárpus fœ'tidus, *S*tátice Armèria white corollaed, and the hardy trolliuses; the last, in the shaded low-lying soil of this nursery, are more vigorous and beautiful than persons accustomed to see them just living and flowering in dry sunny borders can well conceive. — *J. D.*

Drayton Green. — *May* 4. Since our last visit (IX. 517.), Mrs. Lawrence has considerably extended her flower-garden, erected a very handsome green-house, a house for forcing plants, a large mass of rockwork, with rustic arches, a basin and fountain, and introduced a number of statues and other sculptural or architectural objects. The place is now such a gem of picturesque beauty and botanical riches as is not elsewhere to be found in the neighbourhood of London. The plants are most admirably grown, and it is only doing justice to Mrs. Lawrence and her gardener, Mr. Cornelius, to state that the order and keeping of the whole are such as to put it entirely out of our power to find fault.

Among the plants in flower, in the open garden, were some of the most splendid bushes of double-blossomed furze we have ever seen, a large tree pæony covered with bloom, and a splendid hybrid rhododendron, which was afterwards exhibited at the Horticultural Exhibition, May 10. Among the herbaceous plants was a fine collection of heartseases. In the green-house there were, a select collection of beautiful heaths finely in bloom, all the newest and most rare New Holland shrubs, and all the finest pelargoniums.

Greenhithe. — *May* 5. The villa of Mr. Foster is formed on a surface composed of old chalk-pits, heaps of chalk rubbish that have been accumulating for centuries, and chalk cliffs; and it is remarkable for the great variety and romantic character of the scenery which it contains in so small a space. The walks display a perpetual change of scene; they are chiefly of turf, but some of them near the house are gravelled. One walk, along a ridge, affords a remarkably fine specimen of what may be called the elegant picturesque. It is an irregular continuous glade of the smoothest turf, losing itself, on each side, under the branches of the beautiful trees and shrubs. The outline, thus formed, is as full of variety and beauty as can well be imagined. The breadth of this glade or walk is sometimes only 10 ft. or 12 ft., and sometimes 50 ft. or 100 ft. There are two retired glens of smooth turf, completely shut out from the world by high banks, covered with trees and shrubs; not in dense monotonous masses, but sufficiently thin and scattered to allow the plants to display something of feature and character. On these banks there are some fine old thorns, profusely covered with bloom. In short, there is an appearance of nature, and, at the same time, of elegance, pervading all the plantations here, from their thinness, irregularity, and the uneven surface on which they are placed, which never can be produced by thick equidistant plantations on level ground, and neglect of thinning out the trees. Near the house there is a steep bank cut into grassy terraces, which have a fine effect; and, on the side of another very steep hill there are scattered groups of pines and spruce firs, which reminded us of scenery which we have seen in Sweden. The whole of this place was in perfect order and keeping; and it gave us no small pleasure to find that Mr. Foster agreed with us in preferring a garden of ten yards square, kept in the most perfect order and richness that a garden is susceptible of, to one of a hundred acres, kept as gentlemen's grounds commonly are kept. We saw here a purple Brompton stock, between three and four years old, and several feet high. It was magnificently covered with bloom; and had been in much the same state, Mr. Foster informed us, for the last two years.

The Cottage Villa of Mr. Wilson, Surgeon, though not nearly so extensive as that of Mr. Foster, is yet formed on the same description of surface, full of variety, and kept in the highest order and neatness. It also contains some good plants, especially natives, Miss Wilson being a good practical botanist. We saw a remarkably fine plant of *L*ithospérmum purpùreo-cærùleum, of which rare species there is a habitat in this neighbourhood. A summer-house on the summit of a hill in this garden is embosomed in fruit trees, so as to exclude all the scenery immediately around it; and to direct the eye far into the county of Essex, several miles up the Thames, and down that river nearly to the Nore. — *Cond.*

ART. V. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly Number containing eight plates; 3*s*. 6*d*. coloured, 3*s*. plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly Number containing eight plates; 4*s*. coloured, 3*s*. plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Sweet's British Flower-Garden; each monthly Number containing four plates; 3*s*. coloured, 2*s*. 3*d*. plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

DICOTYLEDONOUS POLYPETALOUS PLANTS.

III. Ranunculàceæ § *spùriæ*.

1596. *PÆO'NIA.* (By some, from *Pæon*, a noted physician of antiquity; by others, and with much more probability, from *Pæonia*, a mountainous country of Macedonia, where some of the species grow wild. — *D. Don.*)

14094 *Moutan* H. K. "The *M.* papaveràcea appears to be really the normal form of the species, as the late Mr. George Anderson suggested." (*D. Don.*) [Sw. fl. gar. 2. s. 238
var. variegàta *D. Don* particoloured-*petaled* ■ spl 1½ ap.jn W.P Eng. hybrid? ... L p.l

A low-growing bushy kind, branching from the ground, and scarcely woody. Flowers about 6 in. across. Petals white, stained with a deep rose colour in various parts; the base marked with numerous radiating streaks of violet and purple. Anthers yellow. The Earl of Mountnorris, whose successful culture of the tree pæony has been rewarded by the production of several splendid varieties, far excelling any of those imported from China, has been so fortunate as to raise the present fine variety also, which is remarkable for its dwarf and almost herbaceous habit. It has been raised from seeds of the *P. M.* papaveràcea, which His Lordship supposes had been accidentally fertilised by some of the herbaceous species.

All the varieties raised at Arley [we suppose, those whose names are registered in *Hort. Brit.* p. 482.] were from papaveràcea, and not from Bánksii, as the gardener had inadvertently stated. The tree pæonies are propagated by layers, which should be twisted a little; and the soil best adapted for them is a mixture of vegetable earth and fresh meadow loam. (*The British Flower-Garden*, May.)

LVI. Myrtàceæ § *Chamælaucièæ*.

1495. CA'LYTHRIX *Lab.* (*Kalyx*, a calyx, and *thrix*, a hair; the remarkable hairlike terminations of the calyx. Not from *kalyx*, and *triros*, triple, as some explain it: misled, perhaps, by Labillardière, the describer of the genus, having spelled the word Calytrix. — *Bot. Mag.*, May, 1834.)
12. 1. Sp. 12. — [C a.l Bot. reg. 409
†12833 glàbra *R. Br.* glabrous-*lfd. and bracted* ■ ⊔ or 4 ap.jn W Australia and V.D.L. 1818.
†12834 virgàta *Cun.* twiggy-*branched* ■ ⊔ or 2 ap.au? W N.S.W. 1823. C s.p Bot. mag. 3323
Synonyme: C. ericöides *Cun.* in Field's New South Wales, p. 350. The specific name unsuited, being applicable to all the species of the genus. (*Cun.* in *Bot. Mag.* 3323.)

C. virgàta is very closely allied to C. glàbra, in having its leaves considerably less crowded on the branches, which are altogether smoother, more slender and twiggy, and much more productive of flowers at the extremities. It is, moreover, a freer-flowering shrub; and, as it continues in that condition longer than C. glàbra, and is readily increased by cuttings, it has much to recommend itself to British cultivators. The species is in the Kew collection.

12835 scàbra *Dec.* rough-*lfd. and bracted* ■ ⊔ or 4 ap.jn W Australia 1824. C p.l
Mr. Allan Cunningham has, in the *Bot. Mag.* for May, t. 3323., supplied a synopsis of all the known species of this erica-like habited genus; and sketched their distinctive characters, and adduced their habitats and synonymes. The names of the recognised species are these: — With the leaves stipuled: glàbra *R. Br.*, virgàta *Cun.*, curtophýlla *Cun.*, tetráptera *Dec.*, decándra *Dec.*, Fràseri Cun., flavéscens *Cun.*, strigòsa *Cun.*, brunöìdes Cun., scàbra *Dec.* With the leaves not stipuled: conférta *Cun.*, microphýlla *Cun.*, to which the exstipulàta *Dec.* is synonymous. Mr. Cunningham has stated that "three species of this genus are now in cultivation in the English gardens." These we have given above, with tabular details; and, as we cannot find any trace of the C. floribúnda and C. pubéscens given in *Hort. Brit.*, it seems advisable to cancel the account of the genus therein given, and to substitute the present one.

LXXVII. *Leguminòsæ*.

1980. ADE'SMIA.
viscòsa *Gill & Hook.* clammy-*herbaged* ■ ⊔ or 12 my.o Y.Taw Chile 1832. C lt.l Sw. fl. gar. 2. s. 230

For details on this, see in p. 173. There, and in the *British Flower-Garden*, it is stated to have been raised by Messrs. Allen and Rogers; but, in the *British Flower-Garden* for May, t. 240., this statement is declared erroneous, and corrected to Mr. Knight, Exotic Nursery, Chelsea; who, it is stated, raised it from seeds collected in Chile by Mr. Cuming. We have, since March, seen the plant at Mr. Knight's; and have corrected, above, the tabular details respecting it. A. viscòsa is trained to a western-aspected wall of a building, is 10 ft. high, and was showing some flowers on May 1.

*L*upìnus leptophýllus *Benth.* (of which we have, in p. 173., quoted a notice from *Hort. Trans.*) is figured in the *Bot. Reg.* for May, t. 1670.

2144. KENNE'DY*A*. § Longicarìnæ.
19379*a* ——— ——— 2 ⊔ or 3? f.jn D.P N. Holl. 1832? C s.p Hort. Journal, May, 1833

In p. 244., it is stated that "a species of Kennèdy*a*, a native of New Holland, from Boyd Miller, Esq.," was exhibited at the London Horticultural Society's Show, on April 1. Mr. Miller resides at Lower Tooting, near London. Of this plant, a figure is given in the *Horticultural Journal and Florist's Register* for May, vol. ii.; and, in pp. 78. and 80. of the same number, the following additional facts appertaining to it are stated: — "The plant is an elegant though not a showy twiner. It has flowers so closely approximating to black as to be pronounced the darkest known. Towards the bottom of the plant there are single leaves; but Mr. Wakeling's figure gives a very accurate idea, not only of the blossoms, but also of the character and habit of the plant." According to this figure, the plant, in its habit of growth, resembles Kennèdy*a* rubicúnda, and seems to do so in its (trifoliolate) leaves; the leaflets are shown shorter, and more broadly ovate. The flowers are disposed from six to ten together, in stalked clusters; and are very unlike those of K. rubicúnda, which are usually produced but three in a cluster. Mr. Miller is stated to be the sole possessor of this kind. We think it likely that Dr. Lindley will name, describe, and figure it in the *Botanical Register;* so leave the plant here, without a specific name, in that prospect.

LXXXVIII. E*uphorbi*àceæ.

1460. *E*UPHO'RBI*A*.
†12300 atropurpùrea *W*. dark purple-*bracted* ■ ⊔ or 4 mr D.P Teneriffe 1815. C s.p Bot. mag. 3321
"Discovered by M. Broussonet;" but Dr. Hooker does not represent that it has been also described by M. Broussonet.

"Is well deserving a place in every green-house, from the deep blood colour of its bracteas and floral leaves, which present a strong contrast to the pale glaucous hue of the foliage." The figure has been derived from a plant in the Glasgow Botanic Garden. (*Bot. Mag.*, May.) Messrs. Young and Penny of the Milford Nursery also possess (see p. 236.) this species.

CXVI. R*utàceæ*.

1189. CYMINO'SMA.
11084*a* oblongifòlia *Hook.* oblong-lfd. ■ ⊔ or 6? su.aut W N. S.W. 1824. C lt.l Bot. mag. 3322
Gèla oblongifòlia *Cun.* 1832, Loudon's Hort. Brit. Add. Supp. No. 28887.
Cyminósma oblongifòlia *Cun. MSS.* in Bot. mag. May, 1834. "Closely allied to C. pedunculàta *Dec.*; which is the same as the Gèla lanceolàta *Lou.*, according to Mr. Brown, and, consequently, as Ximènia? lanceolàta *Dec.*; especially to that variety figured by Loddiges (*Bot. Cab.* 938.), with short peduncles." (*Dr. Hooker.*)

A glabrous shrub with oblong obtuse leaves. Flowers whitecorollaed, and borne in axillary corymbs. C. oblongifòlia is in the Kew collection, where "it is treated as a hardy green-house plant, and flowers in the summer and autumn." (*Bot. Mag.*, May.)

CXXII. *a. Limnánthea* R. Br.

LIMNA'NTHES *R. Br.* (*Limnē*, a lake, *anthos*, flower; supposed native habitat of L. Douglàsii R. Br.) 10. 1. Sp. 1.
Douglàsii R. Br. Douglas's ✶ ○ fra 1 aut Y.W California 1833. S m.s Bot. reg. 1673

Leaves alternate, trifoliate, or pinnate. Flowers slightly, but most agreeably, fragrant. Corolla broadly campanulate, three quarters of an inch across, of five petals, which are of a delicate yellow colour, bordered with white. (*Bot. Reg.*, May.) For additional particulars, see p. 174.

CXXXV. Bixineæ.

1568*a*. AZA'R*A* R. & P. (*Joseph Nicholas Azara*, a Spanish promoter of science, and of botany in particular.) 12. 1. Sp. 3 —
integrifòlia *R. & P.* entire-lfd. ■ ⊔ fra 18 ... Y? W? Conception 1832. C l.p Fl. per. 5. 466

Mr. Knight, of the Exotic Nursery, Chelsea, has raised plants of this species from seeds obtained of Mr. Cuming: it is not registered in British books as being previously extant alive in Britain. Mr. G. Don, in his Miller's *Botanist's and Gardener's Dictionary*, i. 297., states that it is "native in groves at Conception, in Chili," and that it flowers in "July and August:" in its native abodes, we presume. We are indebted to Mr. A. Scott for this early notice of a species additional to our catalogues.

CXLIV. P*ortulàceæ*. *P*ortulàca Gilliesii Hook., figured in the *Bot. Mag.* for April, 1831, whose beauty we noted in VII. 338., is figured, also, in the *Bot. Reg.* for May, 1834, t. 1762., where these remarks, with others, respecting it occur: — "It is truly a splendid plant; but, to be seen in perfection, it should be exposed to the greatest heat and the brightest light that our summers will supply. It then opens its large rich crimson flowers in considerable quantity, and lying, as they do, upon a little bed of neat deep green leaves, the prettiest effect imaginable is produced. It is a perennial, and is propagated readily by cuttings. To preserve it during winter, place it in a well-ventilated dry green-house or stove, and allow it water only when in a growing state, and then only in moderate quantity."

DICOTYLEDONOUS MONOPETALOUS PLANTS.

CLXX. E*ríceæ vèræ*.

1345. *A'*RBUTUS. [1826. L p.l Bot. mag. 3320
11079 tomentòsa *Ph.* hairy-*branched and petioled* ✿ └┘? or 4? d W California to Puget's Sound
2 nùda *Hook. & Arnott* glabrous-*branched* Hook. in Fl. Bor. Am. vol. ii. t. 129. fig. 4.

A. tomentòsa flowered in Dec. 1833 in the green-house of the Glasgow Botanic Garden, into which garden it had been received from that of the London Horticultural Society, by whom it had been introduced through Mr. Douglas, who had noticed it as growing in rocky places, and extending from California in the south, to Puget's Sound in the north. Mr. Menzies has also gathered it near the mouth of the Columbia. "The var. 2. seems to be the more southern state of the species." *A.* tomentòsa "is well worthy a place in every collection, bearing copious evergreen foliage, and flowers of a snowy whiteness, well contrasted with the green of the leaves." (*Bot. Mag.*, May.)

1341*a*. PERNE'TTI*A* Gaudichaud. (*Dom Pernetty*, the author of the account of a voyage to the Falkland Isles; a work remarkable for its interest, as well as for its candour and exactness. The original species of the genus was mentioned, by this traveller, under the name of "Bruyère à feuilles pointues.") 10. 1. Sp. 4. —

Generic relations: Gaudichaud has referred to this genus *A'*rbutus mucronàta *L. fil.* [Hort. Brit. No. 28626.], pùmila [Hort. Brit. No. 11080.], and microphýlla. "In both [the genera] *A'*rbutus and *A*rctostáphylos the anthers have two long horns projecting from their back, and the ovary is surrounded by a fleshy ring with ten angles; but, in the Pernéttia mucronàta [and all the pernettias], the anthers have no horns, and are split into four bristle-shaped teeth at their apex, while the base of the ovary is surrounded by ten distinct scales. The genus Pernéttia is, in reality, much more nearly allied to Andrómeda and Gaulthièria than to *A'*rbutus, particularly to Andrómeda *M*yrsinìtes and Gaulthièria serpyllifòlia; which last is certainly no *V*accinium. As far as habit and the structure of the flowers are concerned, *A'*rbutus pilòsa *Graham* [Bot. Mag. 3177., Gard. Mag. 8.] would also be referable to Pernéttia; but we incline to believe that plant an Andrómeda." (*Dr. Lindley.*) [Bot. reg. 1675

†28626 mucronàta *Gaudichaud* pointed-*lfd.* ✿ └┘ or 6? my.jl W Str. of Magellan 1828. L p
*A'*rbutus mucronàta *L. fil.*, Graham in Bot. Mag. 3093. [Hort. Brit. No. 28626.]

Communicated by W. Harrison, Esq., in whose garden at Cheshunt, cultivated in peat, it has, within three years, formed a bush 3½ ft. in diameter, and 2½ ft. high. It is a hardy (through such winters as the recent ones) evergreen shrub, of considerable beauty, on account of the neat appearance and dark colour of its foliage; its flowers are pretty, but they are small, and are produced in an axillary manner, not in bunches, and are therefore not conspicuous. (*Bot. Reg.*, May.)

†11080 pùmila *Gaudichaud* dwarf ✿ └┘ or 4 ... W Magellan 1820. L s.p
*A'*rbutus pùmila *Forst.*, Hort. Brit. No. 11080.

M. Gaudichaud, in his visit to the Falkland Islands, found plenty of another species (Pernéttia empetrifòlia), which formed a small bush covered with eatable berries, and growing at the back of the sandhills wherever a little vegetable mould had been collected. (*Bot. Reg.*, May.)

CLXXI. *Epacrídeæ*.

†513. TROCHOCA'RPA *R. Br.* (*Trōchos*, a wheel, *karpos*, fruit; cells of the fruit rayedly arranged, like the spokes of a wheel.) 5. 1. Sp. 1.

†4315 laurina *R. Br.* *Cinnamon* laurel-*lfd.* ♀ └┘ or 25 ap.au W N. Holl. 1823. C s.p Bot. mag. 3394

In its native country, a tree of regular growth, and 25 ft. high. In the green-house at Kew "an extremely pretty evergreen shrub, having very glossy leaves, with parallel nerves resembling those of many of the laurel tribe, and, like those of the Cinnamòmum vèrum, of a delicate red colour when young. Flowers in terminal spikes, small, corolla white." (*Bot. Mag.*, May.)

CXCVI. *Apocýneæ.*

532. **ALY'XIA.**

4374*a* *ruscifòlia R. Br.*, with the details as in *Gard. Mag.*, X. 238.
Synonyme: A. Richardsòni Swt. in Loudon's Hort. Brit. No. 4373.
2 pugionifórmis *Cun.* dagger-*lfd.* ⚘ ⊔ fra ? s W Moreton Bay 1830. C p.l
Synonymes: Gynopògon pugionifórmis *Cun. MSS.* in 1828; Alýxia pugionifórmis *Cun.*, Loudon's Hort. Brit. No. 28595.; A. *ruscifòlia* var. pugionifórmis *Cun.* in Bot. Mag. May, 1834.

The enumeration of the known species of Alýxia, given in p. 238., was copied from the *Bot. Mag.* for April, 1834. This enumeration is cancelled in the number for May, and the following more correct one substituted: — A. actinophýlla *Cun.*, spicàta *R. Br.*, tetragòna *R. Br.*, stellàta *R. & S.*, obtusifòlia *R. Br.*, *laúrina Gaudichaud*, olivæfórmis *Gaud.*, Torresiàna Gaud., Gynopògon *R. & S.*, *daphnöides Cun.*, *ruscifòlia R. Br.*, scándens *R. & S.*, *buxifòlia R. Br.* These species are enumerated by Mr. Allan Cunningham, who has given, in the *Bot. Mag.*, their diagnostics, habitats, and synonymes. Dr. Hooker has added, that "there are, besides, A. odoràta *Wall.*, calophýlla *Wall.*, lùcida *Wall.*, in Dr. Wallich's list of plants of the Honourable the East India Company's museum."

CCXL. *Scrophularíneæ.*

MI'MULUS Smith*ii* Paxton (see p. 239.) is figured in the *Botanical Register* for May, t. 1674.; where it is quoted, from Mr. George Smith, nurseryman, Islington, that he had raised it from seeds of *M.* variegàtus fertilised with the pollen of *M.* lùteus rivulàris. "It is a hardy plant, with all the habit of *M.* lùteus rivulàris." From Paxton's *Magazine of Botany* for May, we learn that

"Mr. George Smith, Islington Nursery, London, has farther improved this beautiful family; kinds of which he possesses exceeding in beauty the *M.* Smíth*ii*, being not only marked with distinct spots on each petal, but regularly laced round the extremity; the lower lip having three dark marks, and the yellow considerably deeper."

CCXL. *Scrophularíneæ.* § *Buchnèreæ D. Don.*

1782*a*. NYCTERI'NIA *D. Don.* (*Nycterínos*, nocturnal; the flowers of all the species [known up to May, 1834] expanding at night.) 14. 2. Sp. 4.—

The genus is a very natural one; and is essentially distinguished from *E*rìnus and Búchner*a* by the structure of the anthers and stigma, and by the insertion of the filaments. It will contain, besides *E*rìnus Lychnídea *Thun.*, fràgrans, tristis, and africànus of Linnæus, all natives of the Cape, and agreeing remarkably both in habit and structure. (*D. Don.*)

†15891 Lychnídea *D. Don* Lychnis-*corollaed* ♃ ⊔ fra ¾ ap.jn W.P C. G. H. ... C s.p.l Sw.fl.gar.2.s.239
*E*rìnus Lychnídea *Thun.*, Hort. Brit. No. 15891., Bot. Reg. 748.
†15890 fràgrans *D. Don* *evening*-scented ♃ ⊔ fra ½ my.jn W.P? C.G.H. 1776. C s.l Bur. af. 49. 4
*E*rìnus fràgrans *H. K.*, Hort. Brit. No. 15890.
†15892 tristis *D. Don* dark-*corollaed* ♃ ⊔ pr 1 my.jn P C.G.H. 1825. C s.l
*E*rìnus trístis *Thun.*, Hort. Brit. No. 15892.

Nycterínia Lychnídea *D. Don* is a plant of well-known interest for its graceful flowers, and their fragrance in the evening or in cloudy weather. This (and probably all the) species forms a very pretty border plant during the summer and autumnal months. A store of plants, obtained from cuttings or from seeds, should be provided in the green-house to this end. (*The Brit. Flow.-Garden*, May.)

CCXIII. Solàneæ.

489. *PETU'NIA.*

†29217 intermèdia *D. Don* intermediate £ Δ] or 1 au.o P.Y Parana 1832. S l.t Sw.fl.gar.2 s.237
Salpiglóssis lineàris *Hook.* incidentally in the text of Bot. Mag. t. 3113.; statedly and with a figure in Bot. Mag. t. 3256., Gard. Mag. IX. 621.; Nierembérg*ia* intermèdia *Graham* in Edin. Ph. J. 1833; Nierembérg*ia*, section *Petùnia*, species intermèdia *D. Don* in Sw. Fl. Gar. 2. s. May, 1834, t. 237.

Mr. Neill, of Canonmills, near Edinburgh, has raised a plant of this species from seeds transmitted by Mr. Tweedie, who discovered it in sandy plains near the banks of the Parana. "As the plant is found to produce seeds much more freely than the other species, and to be of ready increase by cuttings, we hope soon to see it a common ornament of the flower border, to which its graceful habits, and successive profusion of blossoms of the deepest purple, shaded partly with brown [and centred with yellow], and of a rich velvety hue, cannot fail to render it a most welcome addition. It appears to be quite as hardy as the [*Petùnia*] phœnícea." (*The Brit. Flow.-Garden*, May.)

Petùnia phœnícea proves itself to be, like *P.* nyctaginiflòra, a persistent shrub, in a mild winter and sheltered warm aspect. The plant of which I have spoken in IX. 562. has remained untrimmed in the state in which it ceased flowering last autumn; and now (May 3.) exhibits young shoots, protruded from the last year's branches in various points.

CCXXI. *Labiàtæ.*

76. *SA'LVIA.* [Floricult. cab. fig. unpub.
29219*a* dolichostàchya *Lag.* long-spiked-*inflor.* ✤ ⊔ or 6 au.o S Mexico 1820? C l.t
At first sight, it has the appearance of *S.* fúlgens *Cav.*; but it differs from that in most of the following particulars: — It is twice as high, while the scarlet corollas are only one third the size; and are smooth, except the upper lip, which is somewhat shaggy; the middle segment of the lower lip kidney-shaped, a great deal larger than the two lateral ones; the leaves emarginate, very rugose on the upper surface, and broader, the sinus at the base deeper; the two uppermost sessile; the spikes longer, of from 7 to 20 whorls, each composed of about 12 stalked flowers; the upper lip of the calyx ovate, acute, with a very short incurved point.

Mr. B. Saunders, florist, Jersey, and others in Jersey, possess plants of this species; some of which "were not," in the climate of that island (well known to be always mild), "at all affected by the frosts of last winter." Mr. Saunders received the plant some years ago from England, under the name of "*S*álvia coccínea of Linn.;" but Professor Lagasca, now residing in Jersey, has identified it with the species which he, 29 or 30 years ago, denominated, in his *Elenchus*, *S.* dolichostàchya. Lagasca, while director of the royal gardens of Madrid, first received seeds of it, about 1802, from Mexico, from his friends Sesse, Mocino, and Cervantes. From the Madrid gardens Lagasca distributed it to other gardens in Europe. It is stated to be a beautiful species, which, in Jersey, "grows from 5 ft. to 7 ft. high, and is a handsome bushy plant." (*The Floricultural Cabinet*, May, 101, 102.)

MONOCOTYLEDONOUS PLANTS.

CCXL. Orch*ídeæ.*

2542. CŒLO'GYNE. [Bot. mag. 3318
flàccida *Lindl.* drooping-*racemed* ℰ ⊠ el 1 f W.Y Noakote in Nepal 1829. D p.r.w

Twenty-one species of Cœlógyne are known, all natives of the East Indies, but of which very few have yet been received alive into European gardens. C. flàccida is figured from Wentworth Gardens, to which it had been given by the Hon. and Rev. W. Herbert, who had received it from Dr. Wallich. It is an elegant species, with (in the specimen figured) a pendulous raceme of 8 in. or 10 in. long, and eight moderately large inodorous white flowers. (*Bot. Mag.*, May.)

2558. BLE'T*IA.*
22753*a* Shephérd*i* Hook. *Messrs.* Shepherd's ⚘ ⊠ or 2 ja.m Dp.P Jamaica 1825? D p.l Bot. mag. 3319
"Our plant has been cultivated, by the Messrs. Shepherd [botanic garden, Liverpool], under the name of Limodòrum tuberòsum; from an idea, perhaps, that it was the L. áltum vel tuberòsum of Jacquin. But that plant, I have endeavoured to prove, is the same with our Blè*tia* acutipétala *Bot. Mag.* t. 3217.; and the name tuberòsum being equally applicable to other species of the genus, I am anxious that it should bear the name of the Messrs. Shepherd (uncle and nephew), who have cultivated the orchideous as well as other plants with so much success; and who have paid particular attention to the species of the present genus." (*Dr. Hooker.*)

The B. Shephérd*i* Hook. is nearest akin to B. verecúnda. The leaves are 1½ ft. long, the scape 2 ft. or 3 ft. high. Flowers, both within and without, of a deep purple colour, except the column, which is pale, and the lamellæ of the disk of the lip, which are of a dirty yellow. Plants of B. Shephérd*i* are in the collection at Wentworth Gardens (whence the specimen figured had been derived), and in that of the Liverpool Botanic Garden. (*Bot. Mag.*, May.)

CCXL. Orch*ídeæ.* § *Malaxídeæ.*

2576. LI'PARIS.
22804*a* guineénsis *Lindl.* Guinea ⚘ ⊠ cu ½ s G Sierra Leone 1832. O s.p.l Bot. reg. 1671

Is nearly related to the British L. Lösèl*ii.* Mr. Whitfield brought plants of it in 1832 from Sierra Leone. The plant figured, flowered in September, 1833, in the London Horticultural Society's Garden. L. guineénsis "requires to be kept in a damp stove while growing, but to be removed into a cooler and dry place as soon as its leaves decay." (*Bot. Reg.*, May.)

CCLI. L*iliàceæ.*

CALOCHO'RTUS. We have, in p. 178., quoted notices on the species of this genus. C. spléndens is figured in the *Bot. Reg.* for May, t. 1676.; and C. venústus in the same number, t. 1669. We perceive that, in p. 178., we have omitted the height of C. venústus: this may be stated as 1½ ft. In *Bot. Reg.* 1676., it is stated that C. nitidus has not yet been introduced into Britain; and that "all [the species] are natives of California." The native country assigned, in *Hort. Brit.*, to C. macrocárpus and nítidus should be corrected accordingly; and C. nitidus expunged from the work until it shall have been introduced.

ART. VI. *Retrospective Criticism.*

CORRECTIONS. — In p. 122. line 8. for " Mr. Rule," read " Mr. Rowell" (principal gardener to the Earl of Durham). In p. 197. line 6. for " James the First of Scotland," read " James the Sixth of Scotland."

Botanic and other Gardens at Oxford. — In reading the very interesting account of your visit to Oxford (104—114.), I observed one or two trifling mistakes; which, as I know you will not be offended at it, I shall take the liberty of pointing out to you. In p. 105., should it not have been Dr. Pococke, instead of Cardinal Wolsey? I think it is generally believed at Christ Church that the oldest fig tree in that college (which is now growing in the garden of the Rev. Mr. Pusey, canon of Christ Church, and Regius Professor of Hebrew) was planted there by Dr. Pococke in the year 1648. In p. 107. and 108., in two or three places, for " Tegg" read " Tagg." In p. 109. you inform us, on Mr. Humphry's authority, that he was the first who proposed the establishment of a garden library for the use of the Oxford gardeners. This is certainly a mistake, for the society originated with myself; and its meetings were held at my house, every Wednesday evening, for nearly two years after its first establishment. Dr. Daubeny, Regius Professor of Botany and Chemistry, is president. See our *First Report* [noticed in Cat. Brit. p. 271.]. Page 111. for " Gerarde" read " Sherard." I published only two numbers of my work on mosses, instead of three, as stated in p. 113.

You will, I am sure, be glad to hear that the Professor of Botany is building me a new room (14 ft. square) for my collection of books, &c., on the site of the old one, which is pulled down. Among other alterations that are going on here, the old yew hedges which you speak of are taken down, and their place will be occupied by a border of ornamental shrubs and herbaceous plants. A new hot-house is commenced, and will soon be finished. — *William Baxter. Botanic Garden, Oxford, April* 28. 1834.

Corrections and Suggestions for the Improvement of the new Edition of the Encyclopædia of Gardening. — Directions for forcing flowers in winter and early spring, as practised in some of the London nurseries, would, to many gardeners, be one of the most useful parts of the book; and if a section were devoted to that subject, in my opinion it would be far preferable to the mode adopted in the former editions of the *Encyclopædia.* Many plants, also, are usually forced, of which no mention is made in the former editions: such are the azalea, lilac, pink, &c. A list of the species and varieties best adapted for forcing, distinguishing such as are scented, might be added with advantage.

Few things are of greater importance to a gardener than the knowledge of the best way to destroy or check the ravages of his numerous enemies among the insect tribes; more especially of that " prince of mischief," the red spider. The rapidity with which this insect increases is amazing; and were it not that the age of credulity is passed away, I should almost be tempted to believe in the agency of Dr. Plott's *materia pinguis,* so very unaccountable is the manner in which they are produced. I have now under my charge a hot-house which has lately been painted, the walls whitewashed, and the outer bark of the vines on the rafters carefully peeled off, and the inner bark washed with a lather of soft soap; yet, before the grapes were fairly set, hundreds of red spiders were preying upon the leaves; and although the plants are daily well syringed, the insects continue to increase. In the last edition of the *Encyclopædia,* water is mentioned as a " well-known preventive and remedy;" but having found that ineffectual, I beg to ask if nothing better is known? What are the results of the trials of a preparation mentioned in a Number of this Magazine as being (if I mistake not) then under the test of experiment, by Mr. Mills and others? [See IX. 697.] My brother gardeners will join me in the opinion, that the man who succeeds in discovering a practicable method of exterminating this formidable pest will have a claim upon public gratitude stronger than the most renowned warrior, in the proportion that a destroyer of insects is a more estimable character than a destroyer of men. I am now trying to destroy the white scale on my pine plants: if you think the result worth having, I will communicate it at some future time.—*J. B. W.* [We shall be most happy to receive it; and we invite this correspondent, and others, to supply us with information on all the subjects above referred to.]

The Churchyard at Hedsor.—Your Magazine for December, 1833, was a few days since put into my hand, and I immediately forwarded it to Lord Boston, to give His Lordship an opportunity of reading your remarks on his villa at Hedsor [IX. 646.]. His Lordship was more amused than annoyed by the account you have given of his house and grounds; but your observations on the state of the churchyard appeared to him, as well as to myself, to require some notice. You describe the mode of laying down the gravestones, and the smooth and level appearance of the surface, as indicating "the exercise of an undue influence over the poor." In reply to this, I beg to state that the present mode of laying down the gravestones was adopted, with the general consent of the parishioners, many years since, by the late Lord Boston; a nobleman whose extensive benevolence and kind attentions to the wants and distresses of his poor neighbours exempt him, in the minds of all who had the happiness of knowing him, from the slightest charge of exercising any *undue influence* over them. Among the small population of the parish of Hedsor, there are not more than three families who could afford the expense of erecting any "frail memorial" over the graves of their deceased relatives; and, from the light nature of the soil of which the churchyard is composed, all traces of a common grave would in a very short period moulder away: whereas, under the system adopted by Lord Boston, every individual has a flat stone placed over his grave with his initials engraved on it; and a memorandum of the exact spot, with other particulars, is entered in a register kept for the especial purpose; the whole expense falling on Lord Boston. The neatness, and the absence of every thing unsightly in the appearance of the churchyard, must, and does, gratify every one who sees it; and many of my clerical friends who have visited Hedsor churchyard have expressed an earnest wish that their own churchyards could be regulated in the same way.—*William M. Bradford. Rector of Hedsor, Beaconsfield, April* 29. 1834.

Larch Bark for Tanning.—Mr. Lawrence, among some very sensible remarks on the subject of planting (p. 29.), intimates that larch bark is of sufficient value for the purpose of tanning, to "pay for stripping." Perhaps he would have the goodness to state, through your Magazine, whether the tanners in his neighbourhood are willing to purchase the bark of larch, and at what price per ton? A few years ago I had occasion to thin out some young larches of about the thickness of a man's thigh; and having heard that the bark of this tree was, for its tanning properties, perhaps next in value to that of the oak, I was anxious, if possible, to introduce it to general use. With this view, I applied to a tanner, with whom I had been in the regular habit of dealing for a number of years; but, bearing in mind the extreme reluctance with which men adopt any new system out of the usual routine of their practice *, I proposed, for experiment's sake, that he should have the bark for

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* As an instance in point, I may mention, that, before the cultivation of field turnips was general, at least in this part of the country, my grandfather (as I have often heard) had no small difficulty in persuading a tenant to adopt this kind of husbandry, and try the experiment. At length, however, he succeeded; but only upon this condition: that, provided the farmer sowed his field with turnips, he should pay no rent for the land that year, if the crop were not found to answer.—*W. T. B.*

"A little after the middle of the last century, the late Adam Kennedy, Esq., of Romano, endeavoured to introduce potatoes and turnips into the tenants' rotation of crops, by offering a deduction of 1*l.* per acre from the rent for every acre under turnips and potatoes; but a scheme thus proposed by the landlord was suspected as tending to his own interest only, and the effect of the premium was extremely limited. However, when Mr. M'Dougal, nothing, if he would only be at the expense of peeling it, which would be but trifling, as the bark in the present instance was derived entirely from the trunks of the larches. The larches were accordingly stripped at the tanner's expense; but, when the bark was fit to carry, the tanner, repenting of his bargain, to my no small disappointment, declined taking it home, and actually left it on the ground, though his team was sent to the very spot for a quantity of oak bark which he had purchased from the same plantation. I like to see every thing made available to some useful purpose; and shall be happy to learn more expressly, from Mr. Lawrence, that the tanners in his part of the country have been prevailed upon to try the experiment of larch bark in tanning, and that they find it answer. — *W. T. Bree. Allesley Rectory, Feb.* 19. 1834.

Thinning Plantations. — I quite agree with Mr. Lawrence, that "half the trees which are planted, whether for ornament or profit, are either disfigured, or rendered comparatively valueless, by being originally planted too near together, or by being allowed to remain too long without thinning." And as the majority of those who plant (however strange that it should be so) do, in fact, from one cause or another, most grievously mismanage their plantations afterwards, more especially by entirely neglecting the operation of thinning, or by performing it injudiciously, the idea, as suggested by Mr. Lawrence, of planting on a regular plan, instead of indiscriminately, so that the thinning may be accomplished by rule, and almost, as it were, mechanically, is well worth the attention of landed proprietors.* Irksome as the task may be to the generality, of marking a plantation, I am surprised to find Mr. Lawrence view the work in that light. For myself, I scarcely know a more pleasurable occupation, especially if the trees are of a man's own planting. I am in the habit of cutting a certain portion of woodland (not modern plantation, but old oak coppice) every year. I mark every tree and pole myself; and always look forward to the marking day in the spring as a day of pleasure, and one of the greatest holidays I have in the year. On these occasions I am accompanied by a shrewd intelligent labourer, who has long been accustomed to work in the woods, and takes a pride in setting them up as they ought to be. In a case of difficulty, as, for example, where a number of fine straight poles or samples occur so thick together that it becomes absolutely necessary to take out some, while yet it is painful to condemn any, I often appeal to his judgment, which, I have reason to think, is invariably good. He is always for copious thinning, and complains that we are apt to be too tender-hearted; then he reminds me of his favourite adage, that "a quick nine-pence is better than a slow shilling;" and quotes the authority of his old father (also a woodman in his day) whose maxim was "cut wood and have wood." The great and besetting sin of most planters and wood-owners, unquestionably, is neglect of thinning; and this being the case, in order to obviate the evil, it may be well to recommend the practice of not planting the trees too close together in the first instance. But if planters might be trusted to thin their plantations in time, and sufficiently, thick planting has its advantages, as it affords better shelter, and tends to draw up the young trees, and render them long in the but. The misfortune is, that people will not distinguish between the use and the abuse of any system or method. Drawing up the young trees is a beneficial practice (as already hinted), if adopted in moderation, and to a certain extent; but, when carried to excess, becomes ruinous to the timber, whether planted for ornament or for profit. — *Id.*

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from Roxburghshire, commenced his system on a farm at Linton in 1778, farming at his own risk, the system was immediately adopted universally. (*Stephens on Irrigation and Draining*, p. 37.) — *Cond.*

* As regards the general improvement of landed property, by personal care and superintendence, ornamenting a residence by planting, and, I may add, in almost every other respect, the example of the excellent John Evelyn may be held up as a model for the imitation of the English country gentleman.

Cheap Planting. — I join heartily with Mr. Lawrence in his reprobation of what is misnamed cheap planting, as, for instance, planting by contract. The following voluntary confession may, perhaps, throw some light upon this subject. A labourer who has worked on the same premises for myself, and my predecessors, for more than thirty years, and who was, when a very young man, employed in setting the trees of an extensive plantation, in a bleak, exposed, hilly district, by contract, has several times remarked to me, when I have been planting a tree, and have required his assistance in the work, that I was far more particular, in spreading out the roots, filling in the soil, &c., than he and his fellows used to be when they made the plantations on ——. "We were not very nice about it, Sir," he would say: "we just dug a hole, and stuck the trees in any how; and, so that they would but stand upright, we did not much care whether they lived or died." — *W. T. Bree.*

The gross Neglect and erroneous Practice (with few Exceptions) in the Thinning and Pruning of young Plantations. — To incur the great expense of previous preparation of the soil, enclosing and planting, and afterwards to leave to chance or ignorance the rearing of the timber, is a species of folly that cannot be too severely animadverted on. From the wheelwright's shop or carpenter's yard, to the great naval depôts of timber, knots and rottenness are in every place to be seen, the fruits generally of the woodman's or forester's mismanagement. — *Geo. Burton, late Gardener and Forester to Sir Edw. Kerrison, Bart., at Oakley Park, near Eye, Suffolk. April* 21. 1834. An excellent paper on the above subject, by this correspondent, will appear in an early Number. — *Cond.*

The Horsechestnut Tree is of an eligible habit for giving to woods, through which walks for pleasure are led, and in which boughiness and branchiness near the earth are desired, this boughiness and branchiness. It is, in p. 234., remarked, that the woods in Kensington Gardens are "thin with excessive thickness," and that they, notwithstanding they "have undergone a second weeding in the course of last winter, will bear several more thinnings in succeeding years, till the trees have sufficient room to admit of their putting out lateral branches, and thus prevent the masses being seen through." This remark has reminded me that, shortly previous to the date of it, Mr. Main of Chelsea had pointed out to me, in Kensington Gardens, the happy effects of here and there a horsechestnut tree (and he regretted that they were not more numerous in these and in all woods planted for pleasure), whose pendulous, leafy, verdant branches, reaching far downwards to the earth, were disposed with happy interception to the view beyond, and as a pleasing object for the eye to dwell on, between "the upright," naked "shafts of the tall elms," as the poet Cowper has said in speaking of the elm, and as those of the elms in Kensington Gardens literally are. How lovely a tree (and so easily propagated and cheaply acquirable) is the horsechestnut! I have never seen justice done, in description, to its merits, except in the *Magazine of Natural History*, IV. 238., where Mr. Dovaston has, in a "description of a beautiful tree," fairly set down all its charms. I was once, some ten years ago, told of some nobleman who had a passionate admiration of the horsechestnut tree, and had caused the branches of some fine ones in his grounds to reach quite to the earth, by first fixing them downward with chains, to promote their naturally somewhat prone direction. I mentioned this to Mr. Main, who remarked, that, to prevent cattle biting off the branches of the horsechestnut to the height that they can reach (named the browsing line), as they will the branches of all trees, it is well to chain or otherwise fasten the ends of the branches into the soil, and lay and keep them there until they have there rooted, and so established themselves firmly enough to resist the cattle's attempts to browse them so as to wholly either consume or dislodge them. The arches, too, thus formed, would provide shady, though probably fly-frequented, bowers for cattle. I think that Mr. Main, besides suggesting this, said that he had practised it. — *J. D.*

Mr. Ballard's Treatise on showing the Impossibility of increasing the Quantity, or improving the Quality, of Timber by pruning. (IX. 687.; X. 74.) — If trees ought to be left to nature, every thing else ought to be, and the barren heath should never have been planted at all. Talk of the natural forests of America, indeed! Mr. Ballard can know but little about them. It is well known that, in the forests of America, not one tree in ten will pay for felling; and not one tree in a hundred will pay for exportation. Indeed, where land is selling at a few dollars per acre, one good tree on the acre would pay for the whole; whereas, in England, by proper planting and pruning, 300 trees, worth 10*l.* each, may stand on the acre. Although I firmly believe that the proper pruning of a tree assists the growth of timber, as much as the thinning of fruit, on the garden walls or in the vinery, promotes the swelling of those left; let us admit, for argument's sake, that it does no such thing; still, whatever we may say, there is some difference, in intrinsic value, between a ton of clean timber in one straight log, and a ton of crooked branches or spray. There is a difference in the value of the but end of a tree, and the top end of the same tree, where it is all covered with branches; the top of each tree is a specimen of the unpruned tree, and the but end is a specimen of the well-pruned tree. A tree planted singly, or in a hedgerow, will never shed its branches as it sheds it leaves; the lower branches can only be killed by the crowding of other branches, for example, as takes place when they are under the drop and in the shade of other trees; but, by skilful pruning, a fine clean stem may be obtained for a single tree, as well as for one in the midst of a wood or forest. Look at the plate, or cut, of the beech tree in Woburn Park, given as the frontispiece to Pontey's *Practical Forest Pruner*, and then say whether pruning is necessary or not? I had intended giving you an account of my journey into Scotland last summer, but the *Weekly Dispatch* has monopolised my lucubrations, and I have but little time for writing or revising, but I shall give you a paragraph out of my portfolio, as follows:—"From Langtown to Langholm, the appearance of the country was still more beautiful; whitewashed cottages adorning beautiful situations. Here I saw the loftiest trees I had ever seen in my life, consisting of larch, spruce, and silver fir: it was, as the old shepherd said, 'quite a look, to look up to them;' their tops, indeed, were lost among the clouds! Now these trees had never been pruned, and I had almost begun to renounce my favourite theory of pruning trees; until we arrived at the depôt and sawpits, where I saw the boards and planks exactly resembling a picture of the ragged pole which we had seen at the Zoological Garden at Liverpool, for the bear to climb up; so I hugged my favourite theory still more closely." Every knot proceeds direct from the centre, like a herring bone, only tapering in the reverse way; that is, increasing in size as they get near the surface: thus, *fig.* 41. is a board from an unpruned tree; and *fig.* 42. a board from a well-pruned tree. The small knots in the centre board are of little or no detriment, and the outside boards are incomparably superior. We hear of live knots being better than dead knots, but let me have a tree without any knots at all; and this can easily be obtained by pruning the trees in proper time, the expense of which will not be one tenth part of the expense of cutting the same branches off when they are ten times the diameter.—*John Howden. Heath House, near Cheadle, April* 13. 1834.

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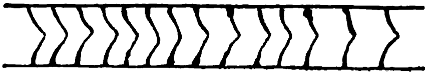

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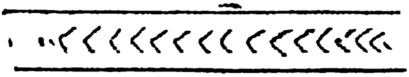

Forcing Asparagus. (p. 147.)—The mode of forcing asparagus, without removing the plants from the beds in the open garden, must be an advantage which, I think, will appear obvious to every one; at least, as far as it respects obtaining fine heads. This, I conceive, is a sufficient reason for the forced asparagus being finer at Paris than that brought to the London markets; as, by the removal of the roots, according to the English method, it is natural to suppose that the shoots must be weakened, and, consequently, not so fine as if the plants were to remain in the ground, and be forced there. The system, I think, cannot be objected to by any one, unless that by its adoption a larger quantity of glass would be wanted; which, being so much cheaper on the Continent than in England, gives the market-gardeners in the neighbourhood of Paris a great advantage over those around our metropolis. Still, I think, nothing should be left undone towards endeavouring to adopt the French system, at least in part. On the supposition that the French mode of forcing asparagus need not be strictly adhered to, as it respects filling up the inside of the frame with hot dung, I should suggest the adoption of oiled paper or oiled calico lights; a considerable number of which could be manufactured at a small expense; and, with care, the paper might last two years, and the calico much longer. In my younger days, I recollect witnessing yearly, two ranges of cucumbers grown under oiled paper lights, which in general answered remarkably well.

I wish, however, to know if what they call white asparagus in Paris is a variety peculiar to itself; or if its whiteness is the effect only of the peculiar mode of growing it? It appears to me that the latter only is the case: and, if so, a question will naturally arise, which is the best for the table; the asparagus which is thus brought forward in a blanched state; or such as, by a different process, would retain more of its natural hue? I am inclined to prefer the latter, as being most likely to secure the end desired, as may be seen in my article, p. 146. Nevertheless, I am open to conviction, if it can be proved otherwise.

In forcing what they call in Paris "green asparagus," there is no mention made of covering the crowns of the plants with earth, which I suppose is not done; consequently, as soon as the buds begin to push, they are immediately exposed to the light, and also to as much air as it may be thought proper to give them. The natural consequence of such a system will, of course, be, to produce green shoots; and their being small may be occasioned by the plants being removed from the beds, and more particularly, if from old beds in a declining state.

For forcing asparagus in the natural ground, instead of allowing only 2 ft. between the beds, as is the French method, I should be inclined to give 2½ ft. or 3 ft.; by which means the dung would retain its heat longer, and be more efficacious, and the alleys, during the years of rest, might be made use of for culinary purposes. — *T. Rutger. Shortgrove, near Bishop Stortford, Essex, April,* 1834.

ART. VII. *Queries and Answers.*

FAILURE of an Ice-house.—I trust some of the scientific readers of this Magazine may be able, from the following account, to give me an explanation of the causes that led to the failure of an ice-house which I built ten or twelve years ago. It was constructed of large dimensions, in the hope that ice might be kept in it from year to year, many winters passing in South Wales when none can be obtained, and was built of stone in the usual form, faced with brick, with hollow walls and three passages, separated by four doors. It has a drain at bottom, through which no air can enter, there being what is commonly called a stink trap. At first there was an opening in the centre of the dome, for the convenience of shooting down the ice; but it has been closed, lest it should occasion the ice to melt, and one has been made in the passage. The ice-house is not under trees, but on the slope of the land, with a wood on its western side; its top is on a level with the land. It has been suggested that it may be sunk too deep under ground, as the height from the top to the bottom is 17 ft.; it being 5 ft. from the passage to the top. The ice has been put in for many winters, well broken, and beaten down into a solid mass; but when the ice-house is opened, after a lapse of several months, the ice is found to have melted; nothing remaining but a small pillar in the middle, and that too soon vanishes. When the ice-house is empty, and the doors are open, it is dry; but when closed, and the ice is in it (for the space of time before it melts), a vapour rises, which drops from the roof. I shall feel greatly obliged to any of your correspondents who can give me an explanation of the causes of this great disappointment. — *D. B.* *April* 20. 1834.

Our correspondent will find an excellent plan for an ice-house, VII. 650., and some remarks on the mode of filling in the ice, &c., in Vol. III. He will also find excellent plans for ice-houses, and copious remarks on the subject, in our *Encyclopædia of Architecture*, § 737. — *Cond.*

Griffin's First Lines of Chemistry. — Ephebicus Horticultor, in a late communication, has recommended to the attention of the young gardener Griffin's *First Lines of Chemistry*. Having, after much trouble, failed to procure a copy of the work, it will much oblige me, as well as several other gardeners, to know where it can be procured? In a small space it contains a great quantity of useful matter; and, as its cheapness puts it within the reach of every gardener, I cannot but regret that, in this age of bookmaking, such an interesting volume should be allowed to get out of print. — *Scientiæ et Justitiæ Amator.* *Feb.* 1834.

Sowerby's English Botany. — Why is this most excellent work not published oftener? Why are such works as are published on the *Músci*, the *A'lgæ*, and the *Fúngi*, put forth in such a shape as to be accessible only to the wealthy, and not, like Mr. Sowerby's *Botany*, to be obtainable by all? When will the mass of the people be supplied with cheap scientific as well as cheap literary food? I am five and thirty, and, really, I am alarmed at the prospect of waiting five or six years till the *English Botany* is finished. I, really, am starving for want of that mental food, which my want of wealth will not enable me to procure; and must I famish? Surely the public will take four Numbers a month of the *English Botany*. — *X. Y. Z.* *March* 19. 1834.

Mr. Sowerby informs us that he intends, very shortly, to bring out the *English Botany* weekly, which, we have no doubt, will be highly acceptable news to many others, as well as our correspondent. — *Cond.*

Absorption of Sap by the Roots of Plants. — I have never been able to satisfy myself on this subject. The material from which the sap or blood of plants is prepared by the leaves, is said to be absorbed from the soil by the spongioles or parents of the fibres only. From this I should conclude that the plant which had the most fibrous roots would grow the most luxuriantly. Now, I have always found the very reverse of this to be the case. According to my observation and experience, plants having the largest and strongest roots, though few in number, and without many fibres, always make the strongest shoots. This induces me to conclude that nutriment is absorbed by the whole of the surface of large roots, as well as by the spongioles on the points of fibrous roots. I once took up two vines, in order to bring their roots nearer to the surface: I was careful to preserve them entire throughout their whole length, though I could not avoid breaking off the whole of the fibres. The growth of these vines the next season was as strong as if they had never been moved. Now, I should wish to know how this is to be accounted for, unless on the supposition that the branchy parts of roots absorb nutriment, as well as the fibres? How does a cutting imbibe its support? Is it through the bark, or through the end where it was amputated? I should say, if I adopted the spongiole system, through the lower end. If so, when a root was cut, it would take in sap faster than when it depended on the spongioles: but this would be absurd in theory, and contrary to fact. — *J. D. P.* *Kent, Jan.* 1834.

The Wireworm. — White mustard seed, sown with wheat or other corn, is said (*Brit. Farm. Mag.*, vol. v. p. 532.) to protect grain from the wireworm. Has it been ascertained, experimentally, that the wireworm will attack the young plants of mustard in preference to the plants of wheat, or how is the fact, if it be one, explained? — *A Constant Reader.* *March*, 1834.

Planting Oaks a Year or Two before the Trees intended to nurse them. — The oak is notoriously a slow-growing tree, at least as compared with many others. Accordingly, when trees of this species are planted as principals, and other trees of quicker growth at intermediate distances, as nurses or supernumeraries, the former are apt to be overgrown, and smothered by the latter. To obviate this ill consequence, I have it in contemplation to try the experiment of planting the oaks first, and leaving the other trees till the next, or perhaps the second, or even the third season following, before they are put in. For the first two or three years after transplanting, oaks can scarcely be said to grow at all; they commonly do little more than exist, or retain life; their growth or increase is a subsequent business, which does not commence till the roots have taken good hold of the ground. Might not the above plan, therefore, be attended with advantageous results? Would it not be the means of giving the oaks a start, as it were, so as to enable them to compete with the other trees? Perhaps Mr. Lawrence, or some other of your correspondents, would give an opinion on the plan suggested. — *W. T. Bree. Allesley Rectory, Feb.* 19. 1834.

Lucombe's Evergreen Oak. (p. 185.) — In reply to your enquiry as to where Lucombe's new evergreen oak can be purchased; a supply, no doubt, can be had at Messrs. Lucombe's and Pince's nursery, Exeter; where, some time since, I saw the original, a fine young tree of great beauty; and, being struck with its appearance, I ordered a couple of plants, to plant at Clawance, in Cornwall, where they, with others of the same variety, more recently purchased, are doing well. Mr. Pince informed me that the variety originated with them; but whether from acorns from abroad, or from those of the old Lucombe oak, I do not now remember. — *T. Rutger. Shortgrove, April* 2. 1834.

The Wicken Tree. (p. 185.) — This is the common name for the mountain ash in Lincolnshire. — *T. May* 3. 1834.

Do Trees die away when their Roots come in Contact with the Roots of decayed Oak Trees? — This is asserted in the *Printing Machine*, No. 5., on the authority of a Parisian Agricultural Report; and I should be glad if you, or any of your numerous readers, would inform me if it is really the case. — *J. G. Birmingham, May* 7. 1834.

Forsyth's Plaster. — I wish that some correspondent, who may have had experience in the use of this vegetable medicament, would state his opinion of the degree of its usefulness, for the purpose for which it was recommended; and give information of the extent to which it is still employed; also whether any other mixture has been adopted, which answers the purpose better. — *T. Rutger. Shortgrove, April*, 1834.

The best Method of treating a House of Geraniums when severely frozen? the best Method of flowering Plumbàgo ròsea, so as to obtain good-sized flowers? and *the best Work (next to Hogg's) on the Auricula*, giving the engravings of the best flowers? are queries, the answers to which are desired by — *An Amateur of Flora. Great Yarmouth, March* 10. 1834.

The Appio Roots. — Sir Robert Kerr Porter, writing from Caraccas to Dr. Hamilton of Plymouth, says, "I will put in the box a few of the Appio roots, with directions how they are to be planted. That useful vegetable, I know, has been already introduced into England, but I am not aware whether it has been productive. Devonshire, I should think, will also prove better suited to the growth of the Appio." Have you, or your readers, any acquaintance with the nature or properties of the Appio? and is it a Glýcine? I shall be glad to learn something about it before I receive the roots. — *Wm. Hamilton. Plymouth, April* 20. 1834.

Probably Ápios tuberòsa *Moen.*, Glýcine Ápios *L.* — *J. D.*

Swelling of the Fruit of the Pine-apple, by extra Supplies of Water and Heat. — E. K. of Ellesmere having requested farther information on this subject, than what is given in p. 189., we applied to Mr. Munro, who informs us that there is really very little to communicate. The two pine plants selected were of the same size, in pots of the same size, and filled with the same soil. Each plant showed fruit in an equal state of forwardness, at the time the experiment was commenced. The one pot was plunged in the tan, in the usual manner, and the other was placed in a shallow pan of water, and set on the tan close to the plunged pot. The depth of the water was about 1½ in., and it was kept at this depth by a daily supply. The plant in the water grew faster than that in the tan; the fruits of both were equally well flavoured, but, as might be expected, that liberally supplied with water was the largest and heaviest.

An eminent pine-grower, with whom we have conversed on this subject, questions whether (on the supposition that this mode of growing pines in water succeeds) it will be of any real use. Young plants, kept in water all the year round, he says, "I am certain will not do; as the mould in the pots would get soddened, and the roots would die. Besides, should it be wished to put a whole houseful of plants in water, it would be attended with considerable expense. But the grand objection against growing pines in water (which is well known to good pine-growers) is, that, if you keep watering the plants until the fruit is ripe, it loses half its flavour. To have pines well flavoured, they should not have a drop of water for at least three weeks before they are ripe. The pines brought to market in general have no flavour, for that very reason. They are watered to the very day they are cut, in order to make them weigh heavier; and, to those who do not understand pines, the look is quite sufficient." — *Cond.*

ART. VIII. *Covent Garden Market.*

	From			To		
The Cabbage Tribe.	£	s.	d.	£	s.	d.
Cabbage, per dozen:						
White - - -	0	0	6	0	1	0
Plants or Coleworts -	0	2	0	0	2	6
Cauliflowers, per dozen -	0	3	0	0	6	0
Legumes.						
Peas per half sieve -	0	5	0	0	7	0
per sieve - -	0	8	0	0	12	0
Forced, per half sieve -	1	5	0	2	0	0
Kidneybeans, forced, per hundred - -	0	1	6	0	2	0
Tubers and Roots.						
Potatoes - per ton -	5	0	0	6	0	0
per cwt. -	0	5	0	0	6	0
per bushel	0	2	6	0	3	0
Kidney - - -	0	2	6	0	0	0
Scotch - - -	0	3	0	0	0	0
New, per pound - -	0	1	0	0	0	0
From Cornwall - -	0	0	6	0	0	8
Turnips, White - -	0	0	4	0	0	6
Carrots, per bunch:						
Old - - -	0	0	3	0	0	4
Young - - -	0	0	8	0	1	0
Horn - - -	0	0	6	0	0	9
Red Beet, per dozen - -	0	1	0	0	1	6
Scorzonera, per bundle -	0	1	6	0	0	0
Salsafy, per bunch - -	0	1	6	0	0	0
Horseradish, per bundle -	0	2	6	0	5	0
Radishes:						
Red, per dozen hands (24 to 30 each) - -	0	0	6	0	0	9
White Turnip, per bunch	0	0	1	0	0	0
The Spinach Tribe.						
Spinach per sieve -	0	0	9	0	1	0
per half sieve -	0	0	6	0	0	0
Sorrel, per half sieve -	0	0	9	0	1	0
The Onion Tribe.						
Onions:						
Old, per bushel - -	0	7	0	0	10	0
Ciboules, green, per bunch	0	0	2	0	0	3
Garlic, per pound - -	0	0	8	0	0	0
Asparaginous Plants, Salads, &c.						
Asparagus, per hundred -	0	3	6	0	6	6
Second size - - -	0	2	0	0	3	0
Small - - - -	0	1	3	0	1	6
Lettuce, per score:						
Cos - - -	0	1	0	0	2	0
Cabbage - - -	0	4	0	0	6	0

	From			To		
	£	s.	d.	£	s.	d.
Celery, per bundle (12 to 15)	0	0	9	0	1	3
Small Salads, per punnet -	0	0	2	0	0	3
Watercress, per dozen small bunches - -	0	0	4	0	0	6
Burnet, per bunch - -	0	0	2	0	0	3
Pot and Sweet Herbs.						
Tarragon, per dozen bunches	0	4	0	0	0	0
Fennel, per dozen bunches -	0	2	0	0	0	0
Thyme, per dozen bunches	0	2	0	0	0	0
Sage, per dozen bunches -	0	2	0	0	0	0
Mint, per dozen bunches -	0	2	6	0	0	0
Peppermint, dried, per dozen bunches - - -	0	1	0	0	0	0
Marjoram, dried, per doz. bun.	0	1	0	0	0	0
Savory, per dozen bunches -	0	1	0	0	0	0
Basil, dried, per dozen bunch.	0	1	3	0	0	0
Rosemary, per dozen bunches	0	4	0	0	0	0
Lavender, dried, per doz. bun.	0	2	6	0	0	0
Tansy, dried, per doz. bunches	0	1	02	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Rhubarb Stalks, per bundle	0	0	8	0	1	0
Edible Fungi and Fuci.						
Morels, dry, per pound -	0	18	0	0	0	0
Truffles, English, per pound	0	12	0	0	0	0
Fruits.						
Apples, Dessert, per dozen:						
Golden Knobs - -	0	1	0	0	1	6
Baking, per bushel - -	0	5	0	0	7	0
American, per dozen -	0	2	0	0	4	0
French Crabs - -	0	8	0	0	10	0
Gooseberry Pippins - -	0	7	0	0	8	0
Peaches, per dozen - -	1	0	0	1	10	0
Nectarines, per dozen - -	1	0	0	1	10	0
Almonds, per peck - -	0	7	0	0	8	0
Cherries, per pound - -	0	15	0	1	0	0
Gooseberries, per half sieve	0	4	0	0	7	0
Strawberries, forced, per oz.	0	0	4	0	1	0
Pine-apples, per pound -	0	10	0	0	18	0
Grapes, Hot-house, per pound	0	2	6	0	12	0
Melons, each - - -	0	10	0	1	0	0
Cucumbers, frame, per brace	0	1	0	0	2	0
Oranges per dozen - -	0	1	0	0	3	0
per hundred -	0	5	0	0	18	0
Lemons per dozen - -	0	1	0	0	2	0
per hundred -	0	6	0	0	12	0
Sweet Almonds, per pound	0	2	0	0	2	6
Brasil Nuts, per peck - -	0	3	6	0	4	0
Spanish Nuts, per peck -	0	4	0	0	0	0
Barcelona Nuts, per peck -	0	5	0	0	0	0

Observations. — The prevalence of warm weather, with genial showers, in the early part of this month, has caused a considerable improvement in the supply of the market, with most of the articles usually furnished at this season. Of cabbages we have had considerable quantities of the early variety cultivated in the neighbourhood of London. This is completely an improved sort in the hands of the London gardeners exclusively. Owing to the mildness of the winter, forced peas did not answer so well as usual, being so rapidly succeeded by those from the natural ground, although many of the early crops were entirely destroyed by frost. We have now a fair supply of early peas, at very moderate prices. Asparagus has been abundant, and very reasonable: it is now in most excellent condition, having the advantage of strong sunshine to bring it to maturity. Cos lettuces are now being supplied, in good quantities, of excellent quality. Potatoes have become comparatively scarce, and realise much better prices; but the supply of other vegetables in abundance will prevent them reaching a higher rate. We have had, as usual, a good supply of early kidneys from the west of England by steam, which proves at once the advantage to the public of such conveyance. Our stock of apples is nearly exhausted, but the supply of rhubarb, now very large, makes up the deficiency in it. Gooseberries come to hand more freely; the crop of gooseberries is very light, but the breadth under culture is so considerable, that no inconvenience will be felt by the public, either in quantity or price. Forced strawberries have been plentiful; the prospect for crop in the open ground is very good. Grapes of excellent size and quality, particularly the black Hamburgh, are plentiful. Some few peaches are also to be seen. Cherries plentiful and good. Pine-apples, of size and quality, are in demand; and have as yet realised a good price. Oranges are plentiful, but not so fine as usual, prices very moderate, but those of the best quality are in demand. — *G. C.* *May* 20. 1834.

Art. IX. *London Horticultural Society and Garden.*

April 15. 1834. — *Books presented.* From the list of these we quote two: Cinquantième Exposition Publique de la Société Royale d'Agriculture et de Botanique à Gand, presented by the Ghent Society; Part ii. of vol. xviii. of the Asiatic Researches, presented by the Asiatic Society of Bengal.

Exhibited. Six lemons from the open air, in the garden of J. Strong, Esq., South Town, Dartmouth. Azàlea *l*edifòlia, a seedling fuchsia, *G*enísta canariénsis, *E*rìca aristàta màjor, Amarýll*is* retinérvia, E'pacris paludòsa, and Mesembryánthemum mìcans, and other plants; from Lady Antrobus: gardener, Mr. J. Green. *Tacsònia* pinnatistípula, Passiflòra racemòsa and alàta, *H*ibíscus *R*òsa-sinénsis, Wistàr*ia* Consequà*na*, Sparrmánn*ia* africàna, *Técoma* austràlis, and Edwárds*ia* grandiflòra; from Mrs. Marryatt, who, on May 6., exhibited some of the same species, with Tríllium grandiflòrum, &c. Three very fine cucumbers, from H. Butler, Esq.

Also, from the Garden of the Society. Gésner*a* latifòlia and bulbòsa, Chorózema Henchmánni, *A*ristolòchia trilobàta, Dracæ`na stricta, Xeránthemum sp.; *Bérberis A*quifòlium, repens, glumàcea, and fasciculàris; Wistàr*ia* Consequà*na*; *Rìbes* speciòsum, aúreum serótinum, and the dark variety of sanguíneum; Magnòl*ia* Soulange*àna*, Euchìlus obcordàtus, and other plants.

Distributed. Numerous packets of seeds of the following vegetables: — Early yellow Spanish radish, Purple Spanish radish, True watercress, Turnip-rootstocked celery, Solid-stalked cardoon, and Brussels sprout.

May 1. — The Anniversary Meeting took place, when a report on the affairs of the Society was read, and officers for the ensuing year elected. It appears from the report, that there has been a surplus of income over expenditure, for the year ending March 31. 1834, of 1574*l.* 18*s.* 7*d.* Out of this sum the Society have paid off two bonds amounting to 920*l.*, leaving the gross amount of the debt at 17,602*l.* 11*s.* 9*d.*; which, there can be no doubt, they will soon be able to discharge.

May 6.—*Read.* A Report on the State of the Thermometer at Night, since April 1., as observed in the Society's garden, by Mr. R. Thompson.

Exhibited. Shaddocks, from R. B. De Beauvoir, Esq. A carved specimen of bamboo from China, from J. Reeves, Esq. Specimens of garden pots, from Mr. Edwards, Burton upon Trent: orders received by Mr. Goode, 15. Mill Street. *E*rìca ovàta, mirábilis, *e*chiiflòra, purpùrea, propéndens, perspícua, vestìta álba, vestìta coccínea, and Hartnéll*a*; Boròn*ia* serrulàta, Chorózema Henchmánn*i*, Berckhèy*a* grandiflòra; *Petùnia*, a new dwarf species, and a large lilac species; Pelargònium, Ne plus ultra; Calceolària viscosíssima and angustifòlia; from Mrs. Lawrence. Zygophýllum sp., from Mrs. Meyer. Ixias, from W. Wells, Esq. Seedling heartseases (sown July, 1833), from Mr. Cockburn, gardener to Lord Mansfield. Sweeney nonpareils, from T. N. Parker, Esq., of Sweeney Hall: these, at this late period, had a rich colour and flavour.

Also, from the Garden of the Society. Wistàr*ia* Consequà*na*, *V*ibúrnum *co*tinifòlium, Duvaú*a* latifòlia, Collèt*ia* spinòsa [Collèt*ia* serratifòlia has stood out, for two or three successive winters, in the Society's garden; and also at the foot of a south wall, in Whitley and Co.'s nursery, Fulham: hence this species may be deemed almost hardy], *A*càcia verticillàta, *P*hlóx procúmbens and vérna, Plectrìtes congésta, Collíns*ia* grandiflòra, *E*uphórb*ia* præ`cox, *R*òsa Bánks*iæ* álba and lùtea; *Ribes* aúreum serótinum, níveum, inèbrians, speciòsum, and multiflòrum; *S*enècio *i*licifòlius, *M*ímulus variegàtus, Collòmia coccínea, Azàlea *l*edifòlia, Anisánthus spléndens, *A*nagỳris índica, *O*nònis angustifòlia, *L*upìnus rivulàris, *Bérberis* glaúca.

The Show at the Gardens, on May 10., was the best that has yet taken place. It was most numerously attended; the day was fine, and the gardens full of the freshness and the vigour of spring. The first striking object on entering was the Wistàr*ia* Consequà*na*, covered with some thousands of bunches of flowers; most of which were expanded to the point of their greatest beauty, and but a few so far as to have begun to drop their corollas.

The plants exhibited for competition were chiefly remarkable for the very superior style in which they had been grown. There were some new and rare articles; such as Deútz*ia* scàbra, a climber from Japan, resembling a *C*ombrètum, and which has now flowered, in the Society's garden, for the first time in Europe. A Xeránthemum from the Swan River, a very handsome annual, which has now flowered, for the first time, in the garden of Robert Mangles, Esq., at Whitmore Lodge, Sunning Hill, Berkshire, was exhibited by his gardener, Mr. Donald Mackay; but the chief display was made by large and gorgeous specimens of Epiphýllum speciòsum, Cèreus speciosíssimus, and the allied species; azaleas, hybrid rhododendrons, heaths, Cape and New Holland shrubs; Cyrtánthus oblìquus, and other *O*rchídeæ; *O'*xalis, stocks (among which were none at all equal to the specimens described p. 278.), Schizánthus, pelargoniums, &c. There was a remarkably fine collection of Dutch anemones, from the nursery of Messrs. Lucombe, Pince, and Co., of Exeter. Some of the flowers were upwards of 4 in. across; and others consisted of two or three flowers, grown together in the manner of the cockscomb amaranth: they were much and deservedly admired. There were several collections of pansies exhibited, of which by far the finest and most tastefully arranged was one of those sent by Mr. Glenny, but which unfortunately arrived too late to enter into competition for the prizes; a collection of tulips, &c.

Among the fruits were, Hamburgh and sweetwater grapes, remarkably large and fine, and several pine-apples, from the garden of Lady Clarke; exhibited by her gardener, Mr. Dowding. We have been promised a journal of Mr. Dowding's grape culture for one year, which will be a most valuable article. There were also excellent grapes, by Mr. Wilmot. Mr. Corbet, nurseryman at Stratford, Essex, exhibited, on the part of Peter Fry, Esq., of Compton House, Somersetshire, two large fruit of a variety of citron, produced from one truss of blossoms on a small plant. We pass over numerous other articles, all deserving of notice. We were glad to see a great many gardeners present:

nothing can do a man, who is shut up for half the year within the walls of his own garden, more good, than comparing his productions with those of thirty or forty other gardeners; and becoming, at the same time, personally acquainted with them. For this reason, we think, these shows, which any one may attend who can afford 5*s.*, will do fifty times more good than the guinea fêtes of former times.

Since the above was sent to press, we have seen, during a week's tour, chiefly in Surrey, a number of gardeners and other persons, who were present at the show, or who had heard of it through their friends, and we can state that, without a single exception, they all seemed highly delighted with it. One exhibiter suggested that placing the plants promiscuously on a stage, though it produced a splendid general effect, yet did not exhibit with sufficient force the peculiar character or excellences of individual species. Some flowers, such as those of Azàlea, he says, do not show nearly so well when looked up to, as when looked down upon; others, on the contrary, such as those of Cèreus speciosíssimus, *A*tragène, *C*lématis, and bell-shaped flowers generally, appear to most advantage when seen from below. Perhaps the best way to satisfy our friend would be to arrange all the plants in rows, each row being placed on a narrow table, and there being a broad path between the tables. The general plan of a show-room so arranged would resemble that of a Lancasterian school; and spectators, beginning at one end, would follow one another, examining each individual plant in succession, till they reached the other end.

The following is the official statement of the distribution of prizes: —

The gold Banksian medal: 1. For a collection of stove and green-house plants, exhibited by Mr. J. Green, gardener to Sir E. Antrobus, Bart.; 2. For grapes and pine-apples, exhibited by Mr. Dowding, gardener to Lady Clarke; 3. For a miscellaneous collection of plants, from Messrs. Rollisson of Tooting Nursery.

The large silver medal: 1. For a collection of stove and green-house plants, exhibited by Mr. Falconer, gardener to Archdall Palmer, Esq.; 2. For grapes, exhibited by Mr. John Wilmot of Isleworth; 3. For a collection of azaleas, from Mrs. Waterer of Knap Hill, near Ripley; 4. For a collection of pelargoniums, from Messrs. Colley and Hill of Hammersmith; 5. For a miscellaneous collection of plants, exhibited by Mr. S. Snow, gardener to J. H. Palmer, Esq.; 6. For a miscellaneous collection of plants, from Mr. Gaines, Surrey Lane, Battersea.

The silver Banksian medal: 1. For a collection of heartseases, from Mr. Salter of Shepherd's Bush; 2. For a cucumber, from Mr. G. Mills, gardener to Alex. Copland, Esq.; 3. For a miscellaneous collection of flowers, from Mr. G. Mills; 4. For a miscellaneous collection of flowers, from Mrs. Lawrence, F.H.S.; 5. For a miscellaneous collection of flowers, from Mrs. Marryatt, F.H.S.; 6. For forced apricots and raspberries, from P. C. Labouchere, Esq.; 7. For a plant of Borònia serrulàta, from Mr. Douglas, gardener to the Earl De Grey; 8. For citrons and shaddocks, from Peter Fry, Esq., Compton House, Somersetshire.

The next exhibition will be on Saturday, June 7.

Art. X. *Obituary.*

Died, at Toft, in Cheshire, on the 23d day of February, 1833, in the 37th year of his age, *Mr. James Houseman*, a frequent correspondent of this Magazine; a man of sound knowledge and good understanding. Though diverted from his profession to a different pursuit, he was a good gardener, and a persevering amateur of botany. — *J. G.* *Feb.* 1834.

THE
GARDENER'S MAGAZINE,
JULY, 1834.

ORIGINAL COMMUNICATIONS.

Art. I. *Notes on Gardens and Country Seats, visited, from July 27. to September 16., during a Tour through Part of Middlesex, Berkshire, Buckinghamshire, Oxfordshire, Wiltshire, Dorsetshire, Hampshire, Sussex, and Kent.* By the Conductor.

(*Continued from* p. 259.)

Elcot Park, —— *Bacon, Esq.* — *Aug.* 16. This place is celebrated as the scene in which the mode of heating hot-houses by hot water was displayed, in 1823 (III. 186.), to the British public; we will not say for the first time, because we have shown (III., *Pref.*) that it was exhibited in the hot-houses at Sundridge Park, by the Comte Chabannes, in 1816; but we do say that it was from the apparatus displayed in this garden that this mode of heating first became generally known to the British public. We also believe that the late Mr. Bacon invented it at Aberaman, in 1821 (IV. 439.), as Mr. Atkinson appears to have done in London, in 1822. (III. 423.) There is nothing uncommon in different persons inventing the same thing at nearly the same time, without any knowledge of each other's ideas. Inventions are more commonly results of the general state of science on a particular subject, at a given time, than of the character or degree of knowledge of an individual mind.

Elcot Park displays an even, featureless surface, sloping to the south, surrounded by a wall of flints, and very imperfectly varied within by clumps and single trees. The house is, we believe, exceedingly comfortable in the interior; but it has a very commonplace appearance externally, and the walks about it appeared to us arranged without sufficient regard to simplicity and dignity. There is a good kitchen-garden, and a most excellent gardener's house. Mr. Whale, the gardener here, has removed a whole wall of full-grown pear trees, taking up all their roots, and planting them in puddle. In front of these, he has, first, a border, 3 ft. wide, which he never crops; next, a grass walk, of 2 ft.; and, lastly, a border, of 6 ft., which he crops very slightly.

The range of hot-houses is 320 ft. long, rather narrow, according to Mr. Whale's idea: but he counteracts this by training his vines in a serpentine manner, and by letting the peach and nectarine trees run half wild. He has grown peaches weighing 8 oz.; and we saw a vanguard peach which measured 9½ in. round. The pines are grown in pits, and the suckers are planted close to the edges of the pots. Georginas, after being planted out, are drawn through inverted sea kale pots, which appear as vases containing the plants: their use is to direct the water to the centre of the root, and to prevent the lower leaves from shading the mignonette or other plants with which the surface of the surrounding ground may be covered. There are nearly sixty varieties of apples in this garden, all finely grown. If we were to enter into the details of the conservatory, and the shrubbery immediately about the house, we might state many things exceedingly creditable to Mr. Whale; and especially to his skill in transplanting trees and shrubs. This he always does in puddle, and without any previous preparation; the secret consisting in taking up all the ramose roots, however deep or far they may extend. This, in fact, may be considered the great art of transplanting trees.

Chilton Lodge, John Pearse, Esq. — *Aug.* 17. The house is placed on a sloping irregular bank, among old beech trees. It is a cubical mass in the modern style; badly placed and badly approached; though the prospect from it is noble and extensive. The pleasure-ground and shrubbery walks are meagre; but these and the kitchen-garden are exceedingly well managed by the gardener, Mr. Hamilton. The gardener's house is good, and much more beautifully situated than that of his master. It is placed on the brow of a bank, with the river Kennet beneath, and water meadows and a fertile country beyond; forming altogether a delightful scene. In the kitchen-garden, we found excellent crops, grown in the very best style. The hot-houses are heated by hot water, by Mr. Stothart, of Bath.

Art. II. *Notice of a Hot-water Apparatus, invented by Mr. John Darkin, Engineer, Norwich.* By Mr. Darkin.

Having observed a paragraph respecting this apparatus in a Norwich newspaper, we wrote to Mr. Darkin, who, with commendable liberality and promptitude, sent us the following letter and sketch. The system adopted appears to be similar to that of Mr. Perkins, but at a temperature not exceeding that of boiling water. — *Cond.*

In reply to your enquiry, I cannot tell whether my hot-water apparatus differs from all others in use or not, never having seen a single design of the kind until after I had constructed my own; and, since that time, I have only read the accounts of those which are described in the Gardener's Magazine. I have derived much amusement from these, from observing that other attempts have been attended with similar difficulties to those which I had to encounter, before I could get this apparatus to act to my wishes. I have great pleasure in sending you a description of it, in order that you may judge of its merits; and, if you think it likely to afford additional hints, and to be deserving of a place in either the *Gard. Mag.*, or in the *Arch. Mag.*, it is very much at your service.

The apparatus consists of a furnace, a boiler, cast-iron tubes of any diameter, an expansion tube, &c., as shown in the accompanying sketch. (*fig.* 43.) The tubes may be connected with the boiler, in any way which circumstances require, and carried in any direction, so that they do not descend

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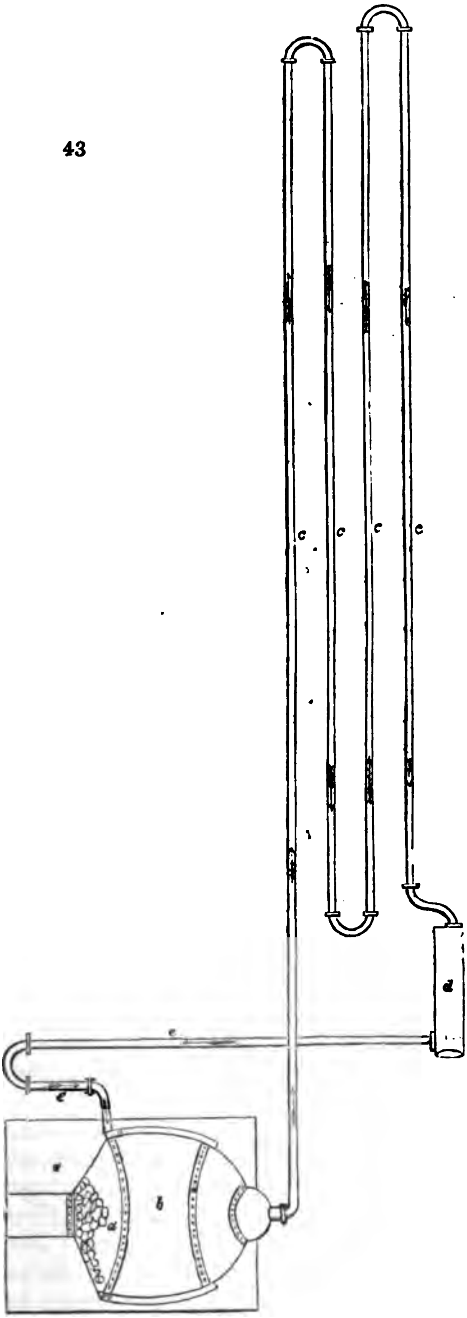

a, Furnace, section. *b*, Boiler. *c c c c*, Hot-water tubes. *d*, Expansion tube. *e e*, Returning tube.

below the level of the bottom of the boiler. It being understood that a given number of superficial feet of tube will throw off a certain quantity of cubic feet of hot air per minute, it can easily be ascertained, by the admeasurement of the house, and the quantity of glass in it, what quantity of tubing is required for it.

I need not enlarge upon the efficiency and economy of my own plan of warming, as you will be a competent judge of its qualities by my description of it. It certainly has a decided superiority, in every respect, over the common mode of heating by flues, and particularly in retaining *the required temperature* with a small consumption of fuel, and very trifling attention. Boiling water is much to be preferred to steam heat. My own green-house, in which the apparatus is constructed, loses but a few degrees of heat by allowing the fire to go out for six or eight hours in the night. A short time is sufficient to make the water boil again, when it expands and displaces the cold water in the tubes, which are immediately supplied with hot water from the boiler, the cold water retiring through the expansion tube down the returning tube, whence it is heated and again projected forward; thus keeping up a continued circulation of hot water through the tubes for a considerable time even after the fire has been allowed to die out.

This apparatus can be applied, with the best effect, to horticultural and public buildings of every description, mansions, offices, warehouses, drying-rooms, &c. &c.; and, as the tubes have no connection with the fire, not a particle of burned air is communicated by them to the room in which they act.

Prince's Street, Tombland, Norwich, June 4. 1834.

ART. III. *On the different Modes of Budding; and of Herbaceous, or Summer, Grafting.*

THE following article we have translated, with some additions and variations, from *l'Horticulteur Belge;* and we present it to our readers as more complete than any article which has hitherto appeared on budding and herbaceous grafting in the English language. We have given the French names of the different kinds both of budding and grafting; not only because we think the doing so will be useful to gardeners who visit the Continent, or read French books on gardening, but because many of the terms are not translated literally. For example, the French apply the word *greffe* (graft) as a generic term including both grafting and budding; whereas the English, and also the Germans, use distinct words for these two kinds of operations. The Germans use the word *veredlung*, ennobling or improving, as including both grafting, *propfen*, and budding, *ocurliren*. In English we have no gardening word to express the two operations, although the word insition might be used for this purpose.

I. Budding. *Greffes par Gemmes.*

1. *Escutcheon Budding, without a Bud or Eye; Greffe en E'cusson sans Yeux.* (*fig.* 44.) — The object of this mode of budding is simply to cover a wound or blemish in one tree by the live bark of another. Take from a tree of the same sort, or at least of the same genus, as the wounded tree, a piece of bark rather larger than the wound, and form it into a regular shape; then cut the bark round the wound into the exact form and dimensions of the piece to be inserted, so that the latter may be let into the former with the greatest exactness. The inner bark of the graft and that of the stock being fitted so as to joint perfectly all round, and the shield closely adhering to the tree in every part, it is kept on by a ligature; and the edges of the wound are covered with grafting-wax or clay. It is a remarkable fact, which some are, perhaps, not aware of, that the wood formed under a piece of bark inserted in this manner, even though that bark be without a bud or eye, will be the wood of the tree from which the shield was taken. In this way several different kinds of wood might be formed on one tree, without introducing a single leaf belonging to those different woods. The portion of wood introduced will always be limited in diameter to the size of the portion of bark put on.

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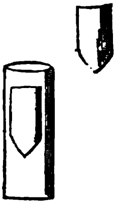

2. *Budding with a Bud or Eye, and a circular Escutcheon; Greffe en E'cusson par Inoculation.* (*fig.* 45.) — With the point of a grafting-knife, or rather with that of a penknife, cut a small bud out of the tree to be propagated, leaving a narrow rim of bark round it, and taking, at the same time, a portion of the wood, which is retained. A hole is made in the stock, of the same size as the bud and its rim, and of a depth equal to the length of the piece of wood left on. The whole is adjusted so that the bud, with its bark and wood, fills up the wound exactly; and the edges are then covered with grafting-wax. This mode of budding is employed to equalise the flower-buds over a tree, by removing some, from where there are too many, to those parts of the tree where there are too few.

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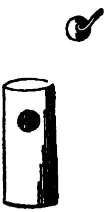

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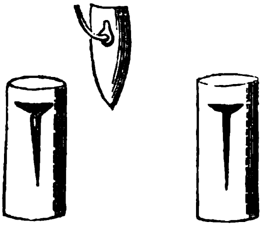

3. *Escutcheon Budding with Wood under the Bark; Greffe en E'cusson boisé.* (*fig.* 46.)—To procure the escutcheon, a deep and transversal incision is made above a healthy and vigorous bud; then, by withdrawing the blade of the grafting-knife, and entering it rather higher than

this cross cut, a narrow strip of bark, three or four lines broad, by 1 in. or 1½ in. long, is taken away, terminating in a point at the bottom. The eye should be situated about a third from the top, and the stipules or other appendages that sometimes accompany the petiole, as well as prickles, &c., must be taken off with caution. With the point of the grafting-knife, the wood of the escutcheon is then taken out, leaving a small piece immediately under the eye, and about a third of the length of the escutcheon. The bud, thus prepared, is inserted in the stock, and then tied as before. This mode of budding is that most generally used in European nurseries.

4. *Escutcheon Budding, with a growing Bud; Greffe en E'cusson avec un Œil poussant.* — The escutcheon is cut and placed in the same manner as by the preceding method; but, as soon as it is inserted, the head of the stock is cut off, and all the buds that push from it, except that from the escutcheon, are rubbed off as they appear. This mode of budding, when done in the spring, has the great advantage of forcing the bud to develope itself immediately, thus gaining a year. However, it sometimes happens that, if the bud does not take, the sap of the stock not being able to find a channel, from all the shoots being rubbed off as they appear, the stock, or at least a great part of its length, dies of repletion. When done in the month of August, this mode of budding seldom succeeds, because the young shoot, not having time to ripen, perishes with the frost, and often causes the death of the stock.

5. *Escutcheon Budding, with a dormant Bud; Greffe en E'cusson avec un Œil dormant.* — This mode is similar to the preceding; but it is performed in August, and nothing is cut away from the stock till the following spring, in order to prevent the developement of the bud before that season. Though longer before it takes effect, this mode of budding is more certain to succeed than the preceding method. It has also the merit of not hurting the stock, if it does not take. The inhabitants of Vitry, who carry on the greatest commerce in fruit trees in the neighbourhood of Paris, use it almost exclusively. This mode is that generally used in the British nurseries.

6. *Escutcheon Budding, without the Wood; Greffe en E'cusson dénué de Bois.* — According to this mode, all the wood is taken away except a speck immediately under the bud; to the life of which bud, however, that speck is essential. The rest of the process is as usual. Besides being very suitable for orange trees, this mode of budding is used for all trees having hard wood, such as myrtles, hollies, and all analogous species, whether indigenous or exotic. It can be done either with the growing bud or dormant bud.

7. *Escutcheon Budding, with Pincers; Greffe en E'cusson à*

Emporte-pièce. (*fig.* 47.) — A pair of pincers ought to be made on purpose, with which a piece of bark is taken off the stock. With the same instrument, or with the blade of the grafting-knife, an escutcheon or plate of bark, having a vigorous eye in its centre, is taken off a young shoot of the tree to be propagated. It must be exactly of the same size as the wound made in the stock, in order to fill it with the greatest precision. When it is properly fixed, it is supported by means of grafting-wax or soft wax. This method is excellent for budding old trees, the thick and rugged bark of which is not suitable for the ordinary modes.

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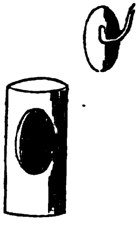

8. *Escutcheon Budding, with the Eye turned downwards; Greffe en E'cusson à Rebours.* — The escutcheon is cut in such a manner that the point of the eye, when placed on the stock, is turned downwards, whether the incision in the stock is made in the usual manner, or like a T reversed, thus, ⊥. By this method, the buds are forced to grow in a direction opposite to that which they would have taken naturally; but they soon resume their usual position; and the desired end, viz., that of increasing the size of the fruit by stagnating the returning sap, is thus by no means attained.

9. *Reversed Escutcheon Budding; Greffe en E'cusson renversé.* (*fig.* 48.) — The escutcheon is prepared in the form of a triangle; but instead of bringing it to a point under the eye, it is pointed above it. It will be perceived that the incision in the bark of the stock must be also reversed; that is to say, instead of being in the form of an upright T, it must be like a T turned upside down, as in the figure. To effect this, the longitudinal incision is made above the transversal one, instead of making it below it. It is finished with ligaments and grafting-wax, as the preceding modes. In comparatively cool and moist climates, like that of Britain, the grafting-wax may be dispensed with in such cases as this and the three or four preceding ones. This manner of budding is almost the only one used in the south of Europe, particularly at Genoa and at Hières, to multiply orange trees. It is also suitable for the propagation of trees having abundant and gummy sap; and it might probably be advantageously employed to secure the success of buds on resinous trees.

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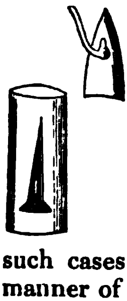

10. *Budding resinous Trees; Greffe en E'cusson d'Arbres résineux.* (*fig.* 49.) — An incision is made in the form of T, as if for an ordinary bud, in the bark of the stock. A double incision is then made obliquely, about two lines or two lines and a

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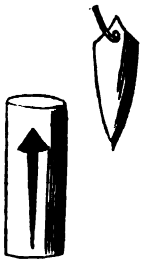

half from the upper part of the T: this incision should penetrate the bark to the thickness of nearly a line, or so as to reach the soft wood. This mode of budding succeeds not only on resinous trees, but also on all those that have a gummy and very abundant sap.

11. *Covered Budding; Greffe en E'cusson couvert.* (*fig.* 50.) — The bud is prepared as usual; but, when it is inserted in the stock, instead of a ligature, the lines of junction are covered with grafting-wax: a piece of bark is then taken from another tree, and, a small hole being made in the middle of it, it is placed on the escutcheon, so as to cover the whole of it except the bud, which appears through the hole, as in the figure. A bandage is then put over the bark to keep the whole together. This mode of budding is rather too intricate for ordinary purposes; but it may be worth adopting for rare and delicate trees.

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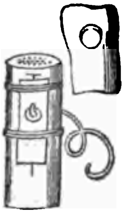

12. *Budding with a square Escutcheon; Greffe en E'cusson carré.* (*fig.* 51.) — Three incisions are made in the stock, one transversal, and the two others longitudinal, beginning on each side of the horizontal one, and descending perpendicularly four or five lines. They are to be four or five lines apart, and to represent a long square, the bottom line of which is wanting. This square strip or plate is raised and turned down, as in the figure. A square escutcheon, provided with a good eye, is then cut from a branch of the tree which is to be propagated, exactly of the same size as the plate stripped down the stock; and it is applied to the incision, which it must cover with the greatest exactness. This being done, the plate of bark, which was hanging down on the stock, is raised, and the escutcheon covered up to the eye; the line of junction is then coated with grafting-wax, and the whole is tied like other buds. It appears that this mode of budding was much used formerly, and that it succeeded perfectly: but, as it is rather tedious in the execution, it is now seldom employed.

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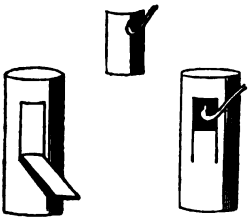

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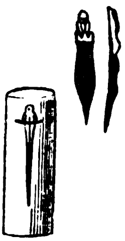

13. *Escutcheon Budding, with a Portion of Terminal Buds; Greffe en E'cusson par Portion d'Yeux terminaux.* (*fig.* 52.) — A piece, measuring six or eight lines in length, cut from the top of a branch, is split in two, dividing the terminal bud exactly in the middle. An incision is then made in the stock in the form of a T, and the half bud is inserted into it

in the usual manner. In case of need, the terminal eye might be divided into four equal parts. The growing bud ought to be used to insure success, though this mode will sometimes succeed with a dormant bud. This method may be very useful, if the tree to be propagated has no young side shoots strong enough to admit of a bud being taken from them. It is particularly suitable for rare trees, with scaly buds and opposite branches.

14. *Annular Flute Budding; Greffe en Flûte en Anneau.* (*fig.* 53.) — A branch is chosen on the tree which is to be propagated, as thick as, or thicker than, the stock, and a ring of bark, including an eye, is cut from it, and detached by splitting it perpendicularly on one side, and then separating it from the wood by inserting under it the spatula-like handle of the budding-knife. A similar operation is then performed on the stock; that is to say, a ring of bark, exactly of the same size, is detached from the stem in the same manner, but without caring whether there are buds on it or not. In its place is put the ring taken from the branch to be propagated, with the precaution of making the inner barks join together exactly both at top and bottom. No binding is applied; but the whole is covered with grafting-clay (*onguent de St. Fiacre*) or grafting-wax. Neither the branches nor the head of the stock are to be cut down till the bud has taken. The two periods most favourable for this sort of budding are, the time of the greatest movement of the sap in the spring, and at the end of its greatest movement in August. This mode of budding has the advantage of never mutilating the stock; because, if it does not take, the bark of the ring supplies the place of that taken away. [*] It is not only suitable for the propagation of walnut trees, but also for the increase of all rare trees with hard wood, such as the American oaks and chestnuts.

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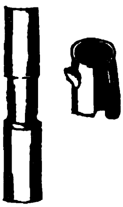

15. *Split Flute Budding; Greffe en Flûte fendue.* — The only difference between this and the preceding mode is, that, if the ring of bark containing the bud is larger than the space prepared for it on the stock, a piece must be taken from it longitudinally, so as to make it fit exactly.

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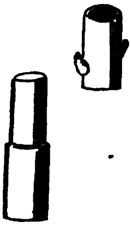

16. *Flute Budding by close Contact, Tube Budding; Greffe en Flûte par Juxtaposition, ou en Sifflet.* (*fig.* 54.) — The head of the stock being cut off, a ring of bark, 2 in. or 3 in. long, is removed. A shoot is then taken from the tree to be increased, of exactly the same thickness as the stock, and a ring or tube of bark is taken off the thick end, without being split longitudinally, not quite so long as the

piece of bark taken off the stock, but provided with two or three good eyes. The tube thus formed is placed upon the stock in the room of the one taken away, and care is taken to make the two edges of bark join below. The part of the stock which projects over the ring of bark is next split into shreds, and brought down over it all round, so as, when secured by grafting-clay, to keep it in its place. This mode of budding is chiefly employed in the south of France for propagating walnuts, chestnuts, figs, mulberries, and other trees with thick bark and abundant pith.

17. *Common Flute Budding; Greffe en Flûte ordinaire.* (*fig.* 55.) — The head of the stock is cut off; but, instead of removing a ring of bark, as in the preceding mode, it is cut longitudinally into four or five strips, each 2 in. or 3 in. long, and turned down as in the figure, being left still attached to the tree. From a shoot of the tree to be propagated, a tube of bark is taken, furnished with four or five eyes, rather shorter than the strips, though longer than in tube budding. When the tube of the scion is slipped on the stock, the strips of bark are raised over it, and fastened at the top by a ligature. This method of budding is in very general use both in France and Germany.

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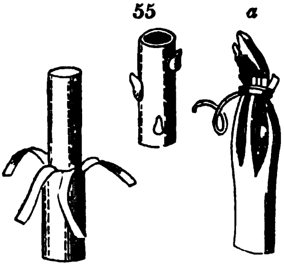

18. *Flute Budding in Shreds, with the Stock cut obliquely; Greffe en Flûte et en Lanière.* — This is nothing more than the mode above described, with the end of the stock cut obliquely, as shown at *a* in *fig.* 55., instead of being left to be afterwards cut into shreds and turned down over the tube of bark, as in tube budding, No. 16., *fig.* 54.

II. HERBACEOUS GRAFTING. *Greffe Herbacée.*

1. *Grafting upon fleshy or tuberculous Roots; Greffe sur Racines chranues ou tuberculeuses.* (*fig.* 56.) — It not unfrequently happens that a tubercle of a georgina root is found without eyes; and, when this is the case, notwithstanding all the care of the cultivator, it may remain in the ground one or two years without budding, till at last it rots. This imperfection is easily discovered if the neck of the tuber is looked at attentively, for it is always there that the buds are found. In this case, as soon as a georgina bud upon some other tuber has begun to germinate, it is picked out with the point of the grafting-knife, and is taken away with a small piece of the tubercle adhering to it. On the neck of the barren tubercle a small hole

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is made, in which the bud is inserted, but in such a manner as that the base of the bud shall be perfectly on a level with the surface of the tubercle; and it is cemented with grafting-wax. The tubercle is then planted in a pot, taking care not to cover the neck on which the graft is, and the pot is plunged in a hot-bed under glass. When the graft has taken properly, the plant is turned out into the open border.

2. *Herbaceous Furrow-Grafting for vertical Shoots; Greffe herbacée en Rainure pour les Omnitiges.* (*fig.* 57.) — A bud with a triangular slice of bark and wood, when in a soft or herbaceous state, is cut out of the scion, and inserted in a corresponding groove made in the stock, as shown in the figure; a ligature is applied, and afterwards grafting-wax. This mode of grafting succeeds both with the young wood of trees and with herbaceous plants, whether perennial or annual. M. Tschoudy gave the arbitrary name of *omnitiges* to those plants, all the shoots of which have an equal tendency upwards, and which, of course, are all equally suitable to graft upon.

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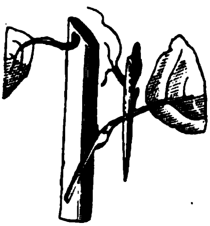

3. *Herbaceous Grafting for Shoots with opposite Leaves; Greffe herbacée pour les Bourgeons à Feuilles opposées.* (*fig.* 58.) In the middle of the stem, between two opposite eyes, an angular and longitudinal incision is made, traversing the stem from one side to the other. The graft is cut angularly at its top and bottom, and it is inserted as in the figure. The binding, &c., is then put on as usual. This mode of grafting is suitable for those species of trees, and annual or perennial plants, the buds of which are opposite on the stem, which happens most frequently on the central shoots of plants. M. Tschoudy gives the name of *multitiges* to those plants, the central shoots of which have a tendency to rise more vertically than the lateral ones, and which have consequently more vigour: it is upon these central shoots that the grafts ought to be made.

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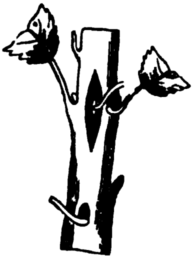

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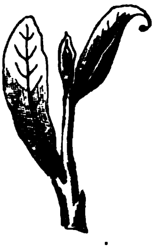

4. *Grafting on the Stem of Annual or Perennial Plants; Greffe sur Tige de Plantes Annuelles ou Vivaces.* (*fig.* 59.)—The period chosen for this mode of grafting is that of the greatest vigour of the plant, that is, some days before its going into flower. The stem of the stock is cut through above a leaf, as near as possible to its petiole, and a slit downwards is made in the section. A shoot is then taken off near the root of the plant to

be increased, the end of which is cut into a wedge shape, and is inserted in the slip made in the stock, taking great care of the leaf on the latter; for it is that which must nourish the cion until it has taken thoroughly, by keeping up the circulation of the sap. A bandage is applied, and the junction covered with grafting-wax, as before. When the graft has taken, which is ascertained by its growth, the ligature is removed, and the old leaf, and the shoots from the stock below the graft, are removed. M. Tschoudy grafted in this manner artichokes upon cardoons, and other plants on their congeners.

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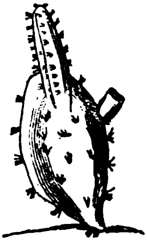

5. *Grafting on Succulents; Greffe des Plantes Grasses.* (*fig.* 60.)—Take a young shoot or leaf of a succulent plant (for example, of a cactus or opuntia), and, cutting its base to a point or wedge, insert it in a hole or slit made in the stem or leaf of another species, but of the same genus.

6. *Grafting the Melon; Greffe du Melon.* (*fig.* 61.) — On the stem of a cucumber, or any other plant of the family of Cucurbitàceæ, but having some analogy with the melon, choose a vigorous part of a shoot having a well-developed leaf. In the axil of this leaf an oblique cut is made, of half its thickness. The point of a melon shoot, so far developed as to have its fruit quite formed, is then cut off, and pointed at its end, 2 in. below the fruit. It is inserted in the cleft made in the stock, always taking care to spare the leaf until the cion has taken. The remaining part of the operation is performed in the usual manner with ligatures and grafting-wax. This mode of grafting succeeds pretty well; but it has not hitherto been applied to any useful end. Tomatoes may be grafted in this manner on potatoes, and it is said that potato plants thus treated produce good crops both of potatoes and tomatoes.

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Grafting-wax may be formed with turpentine, bees' wax, resin, and a little tallow, melted together. It may either be put on in the same manner as grafting-clay, but not more than a quarter of an inch in thickness; or it may be very thinly spread upon cotton cloth, and used in shreds like sticking-plaster. In this last state it serves both as a ligature for retaining the escutcheon or scion in its place, and as a covering for excluding the air. In very delicate budding and grafting, fine moss and cotton wool are frequently used as substitutes for grafting-clay or grafting-wax; the moss or cotton being tied firmly on with thread or strands of bast matting.

Art. IV. *A Series of Designs for laying out Kitchen-Gardens.* By Mr. T. Rutger. Design 2., *Containing an Acre within the Walls, and Half an Acre in the Slips.*

The plan (*fig.* 63.) is meant either for a mixed garden, or for a plain kitchen-garden. By a mixed garden, I mean one where flowers are introduced in the borders in the place of vegetables, for which, however, I am no advocate: still, in cases where there are no flower-gardens, it has been occasionally adopted. Gardens of this description are certainly exceedingly pleasing to the admirers of Flora, however they may be disliked by gardeners. Espaliers, in this case, are highly desirable, as they shut out from the view everything that would otherwise be obnoxious. I have seen gardens of this description that have been greatly admired; and therefore I am inclined to give one of them, which, at the same time, may be available for a plain kitchen-garden, in which case the conservatory, green-house, and forcing-house for flowers may be omitted; the central walk may be carried through to join the central walk of the garden, and the doorways at the sides may be closed up. The area of this garden contains the same space as Design 1., fig. 35.; but about half an acre is added to the slips: this also gives the advantage of the east and west aspect of the side walls on the outside for fruit trees.

I have also given the plan of a flower-garden (*fig.* 62.) for the entrance ground, if wanted: it is meant to be in the Dutch style, with box edgings. The irregular border adjoining the fence is intended for choice shrubs; and the two side clumps for American plants.

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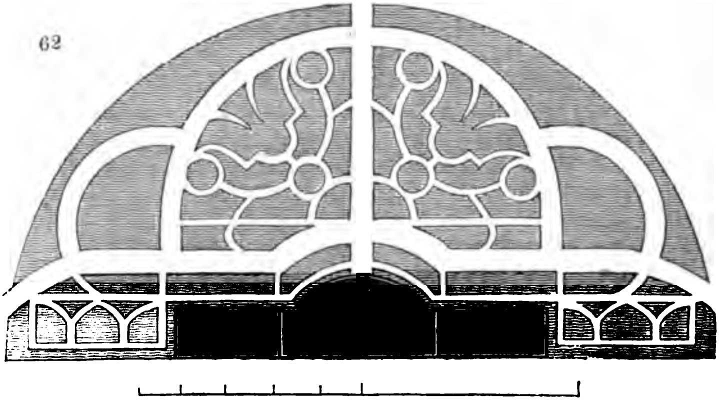

Shortgrove, Essex, 1834.

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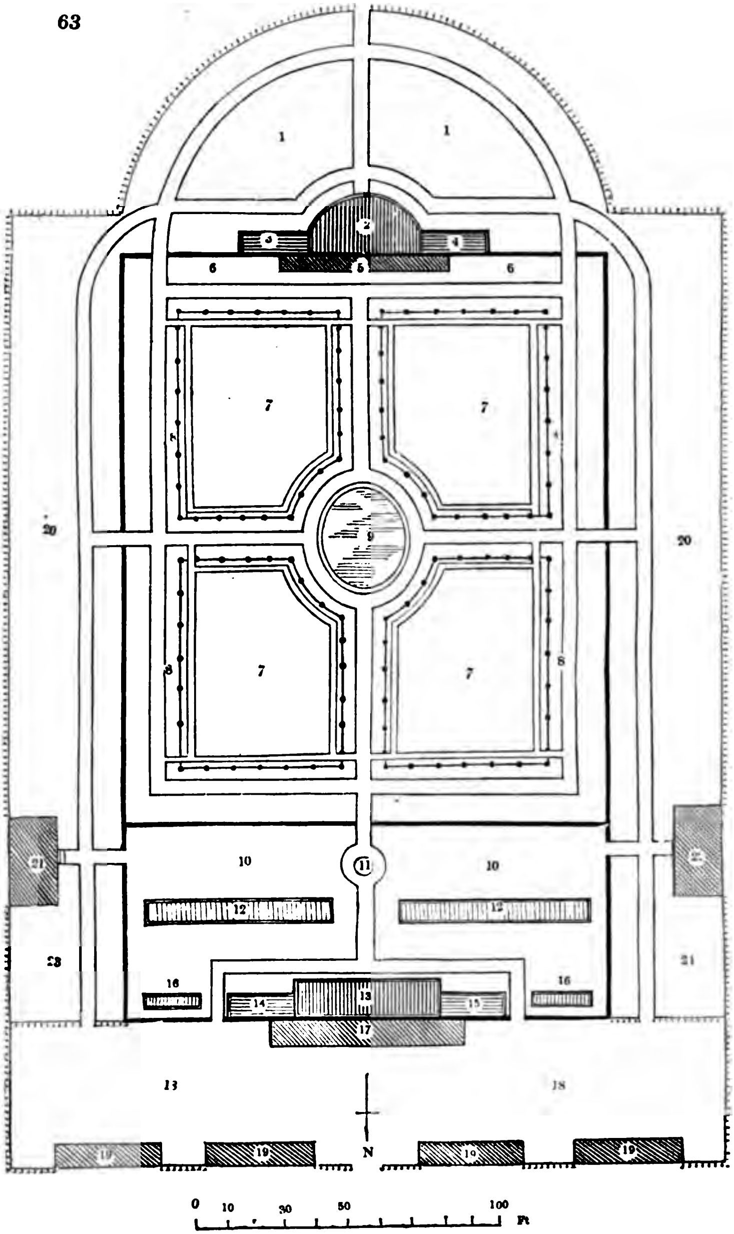

Reference for a mixed Garden. — 1. Flower-garden. 2. Conservatory. 3. Green-house. 4. Forcing-house for flowers. 5. Back shed. 6. For green-house plants in summer. 7. Culinary departments, with espaliers. 8. Flower borders. 9. Pond, surrounded with a grass verge. 10. Forcing department. 11. Water basin or pump. 12. Ranges for melons, cucumbers, &c. 13. Pine-stove. 14. Peach-house. 15. Vinery. 16. Pits. 17. Back shed. 18. Department for compost, mixing dung, &c. 19. Mushroom sheds, tool-house, wintering vegetables, &c. 20. Slips. 21. Gardener's house. 22. Fruit and onion room, with lodging-room for under-gardener, and seed-room over. 23. Yard to gardener's house. 24. For pot-herbs.

Reference for a plain Kitchen-Garden. — 1. Fruit garden. 2, 3, 4, 5. To be omitted, if not desirable. 6, 7, 8. Culinary departments, with espaliers. 9. Pond. 10. Forcing department. 11. Water basin or pump. 12. Ranges for melons, cucumbers, &c. 13. Pine stove. 14. Peach house. 15. Vinery. 16. Pits. 17. Back shed. 18. Department for compost, mixing dung, &c. 19. Mushroom sheds, tool-house, wintering vegetables, &c. 20. Slips. 21. Gardener's house. 22. Fruit and onion room, with lodging-room for under-gardener, and seed room over. 23. Yard to gardener's house. 24. For potherbs.

ART. V. *On taking up the Roots of the Scarlet Runner in the Autumn, preserving them through the Winter, and replanting them in Spring.* By Mr. JAMES CUTHILL, Gardener to Lawrence Sullivan, Esq., Broom House, Fulham.

I HAVE made a discovery, with respect to the scarlet runner, which, I am told, may prove of some consequence both in the management of gentlemen's gardens, and those of cottagers.

In the month of November last, when digging the ground where the crop of runners had grown, I could not help noticing the large size of the roots; and it occurred to me that, if I took them up, potted them, and kept them in a cold pit during the winter, they might furnish another crop the following spring. I tried the experiment on two of the best roots, potting them, and keeping them in a cold pit till the 1st of February. At that time I put them into a hot-house, in which the average temperature was about 60°. They soon began to send up strong shoots, and to show flower in abundance from the ground upwards. They are now about 12 ft. high, and make a very good appearance in a green-house, where they pass with many for a new species of plant.

If I had saved thirty or forty roots, and had put them in heat in spring, in the manner done with georginas, and if I had turned them out in the open air about the same time that these plants are turned out, I certainly should have been able to gather kidneybeans a month sooner than is done by the usual practice of sowing in the open garden.

In cottage gardens, the roots might be taken up every autumn, and preserved in the same way as those of potatoes; and, by being planted on a fresh piece of ground in spring, they would not only produce a much earlier, but a much more abundant crop than one raised from seeds.

Fulham, May 10. 1834.

WITH this communication Mr. Cuthill sent us ten racemes of flowers, on most of which a number of pods were set; in some five, and in others six or seven. For previous notices of the scarlet runner, and of crops obtained from plants of it in their second year, see VII. 485., VIII. 53. — *Cond.*

Art. VI. *On Fruits and Fruit Trees.* By Mr. T. Rivers, Jun.

I am a great lover of fruits, and a persevering cultivator; that is, I spare no pains or application to arrive at correct nomenclature; but surely no one, but a man like Mr. Thompson of the London Horticultural Society, can form any idea of the extreme difficulty of attaining that object. Before the publication of the *Pomological Magazine*, and the last *Catalogue of the London Horticultural Society*, it was all confusion "worse confused." Some ten or fifteen years since, I used to order the same article of two or three respectable London nurserymen, and, if they all proved of similar habits, I hoped I had got the right; but if, as it often happened, they were all different, I almost despaired of getting correctly the plant I wanted. There was no individual blame, for we nurserymen all thought we were right. Thanks to the London Horticultural Society, these times are passed, and we now know what to recommend. Mr. Thompson will, however, find the *Catalogue* even now to require revision and correction in the next edition: his ample notes taken in season, and his fine opportunities for taking them, will allow him to do this in the best possible manner.

It is now some years since you inserted my account of an orchard in miniature in your Magazine [*Malus*, in III. 281—283.]: it is still in being, and annually exacts my admiration. Planted on untrenched ground, the substratum strong clay, and the surface never dug, though kept quite clean with the hoe, the trees make short shoots, which are made still shorter by the knife in July: in consequence, every tree is a dense mass of blossom and fruit in its respective seasons, quite delightful to witness. None of the trees are larger than a full-sized gooseberry bush. [fig. 104. in III. 282.] [Mr. Turner of the Bury Botanic Garden, who has seen this miniature orchard, has expressed to us his admiration of it. — *J. D.*]

The Flemish and other new Pears. — Every person with a garden of ten square yards ought to plant an Easter beurré, a Marie Louise, and a Hacon's incomparable pear: if they have a larger garden, let them add gloux morceau, beurré Diel, beurré rance, and passe Colmar. These pear trees are all great bearers of fruit of excellent quality; and they seem to flourish in any soil. Confine their roots in a basin of stones, and you may have a pear orchard in miniature without quince stocks. I have a pyretum, in a row on each side of a walk, of nearly 200 varieties, in which is every sort that I have ever heard of as worth notice: besides this, in different parts of the grounds, in detached rows, are upwards of 600 pear trees for bearing fruit, in various stages of growth, from 5 years to 50. Every tree planted by my ancestors (for we have been "located" here nearly a century), of a sort not exactly to my mind, I have had grafted with the new varieties; and the effect is wonderful. I hope soon to be able to send all the valuable sorts to market in as great abundance as we have hitherto done those that are common and comparatively worthless. I have omitted to say that all nurserymen may grow specimens of their pears even in a confined space: every alternate year, let a man look over the trees in winter; and apply to the roots of all those beginning to shoot luxuriantly, a sharp spade with unsparing hand; reduce the shoots a little at the same time, and there will soon be a regular crop of blossom buds.

I have also formed a proof walk of *Apples* of 250 sorts. I do not allow myself to get beyond this number. As the seasons roll on, and defects appear, either in quality or growth, I give some their dismissal, some their introduction, and at last hope to be somewhat near perfection. The spade is applied to the roots of the apple trees in the same manner as to those of the pears, to check luxuriance; they are also planted in untrenched ground, with a solid clayey substratum.

Plums and cherries are not quite so tractable, being rather impatient of amputation, though I do not despair of keeping plums within "rules polite."

An Orchard in Pots. Take some large pots, eights or twelves of the London potteries, some strong yellow loam mixed with one third of good rotten dung in lumps; well drain the pots with large pieces of tiles or broken pots, and in this compost plant selected small dwarfs of Hawthornden, courtpendu plat, Kerry pippin, golden Harvey, Cole's golden drop, Keswick codlin, and scarlet nonpareil apples; Passe Colmar, sickle, Beurré de Capiaumont, Marie Louise, and Easter beurré pears; also two or three dwarf prolific nuts. Let the pots stand in the centre, if a confined garden; and by all means keep on their surface, all summer, lumps of rotten manure. Thus treated, it is astonishing how they will flourish; and, if well supplied with water (if manured water, the better), they will bear plentifully. In very severe winters, a little straw should be put over the pots, to prevent the roots being injured by the extreme frost. This may certainly be called a cockney orchard; but ~~I know that~~, if it is not profitable, it is very pretty. Mr. Catling, an accomplished gardener at Cambridge, several years ago fruited the Hawthornden apple in a pot. ~~If I recollect rightly~~, he exhibited a plant or plants of it, bearing fruit, at one of the shows of the Cambridgeshire Horticultural Society, where it, or they, were much admired. — *J. D.* In Diel's *Obst-Orangerie in Scherben*, it is shown that every description of fruit tree may be fruited in pots. M. Diel proved all the principal apples, pears, cherries, and plums grown in Europe, and afterwards published a descriptive catalogue of them. *Cond.*]

Grapes from Layers and from Eyes. I have never been able, after a year or two, to observe any difference in their habits. A prejudice has sometimes arisen against layers, owing to their being planted with vigorous shoots, and not very vigorous roots; that is, layers but one year in pots. We English nurserymen are apt to sell all our plants too young: in this trading country, one wants a quick return, even nurserymen!! "Heaven save the mark!!" why, we ought not to have a return, but once in ten years. Grapes ought to be layed in 32-pots the first year; removed from the stool, and put into larger pots, the second year; again removed into twelves the third or fourth year, and not sold till they bear fruit; and then the gentleman who plants his vinery in January may have an abundant crop of grapes in September. Again, our trained apples, pears, plums, cherries, peaches, nectarines, and apricots should be trained two years to form the plants; and then, instead of allowing them to get full of rampant and luxuriant wood, let them be removed *every season*, till all their shoots are fully furnished with blossom buds, and their roots are in a state to give those buds enough nourishment to bear fruit even the first season of removal; so that the planter on the wrong side of sixty may not have occasion to sigh when he looks at his fruit trees, and to mentally ejaculate, "Before you give me fruit, I may cease to require it."

Perhaps, to do all this, a nurseryman ought to have his threescore and ten years extended to five score and ten; but, above all, he must have his price increased. Now, here is the difficulty: in doing all this, we should, like many other great but unremunerated men, live before our times: our trees, that would save a man seven years of his life, would be wanted at the same price as an unprepared tree; for, in writing, A. will offer a trained tree at 5*s.*, B. will offer his at 7*s.* 6*d.*, and in a note calls his prepared trees in a fruiting state; nevertheless, A. will have the order, because he is cheaper, and B.'s recommendation will be thought the puff professional. This will take place in eight cases out of ten, for in such disproportion are intelligent amateurs of gardening; so that poor B., like all clever fellows that march too fast, will find that his peep *in futuro* will give him but little profit. However, as the plan has not yet been tried to any extent, let us hope, in this advancing age, that prepared fruit trees may, in a short time, be appreciated. I shall most certainly try it; and will, some distant day (life permitting), send you a trained Easter beurré pear, with a blossom bud at every joint, and see you pluck pears in October, from a tree planted the same year. J. Rivers, Jun.

Sawbridgeworth Nursery, Feb. 1834.

REVIEWS.

Art. I. *Catalogue of Works on Gardening, Agriculture, Botany, Rural Architecture, &c., lately published, with some Account of those considered the most interesting.*

BRITAIN.

A Catechism of Gardening, in which the most useful Culinary Plants in Cultivation are enumerated; and the easiest Methods of Management and Culture are familiarly described. Intended for the Use of Village Schools and Cottagers. Written originally for the "British Farmer's Quarterly Magazine." By an Old Practitioner. 12mo. London, 1834. 1*s.*

This is a cheap little practical work, by Mr. Main, and far better adapted, as we think, for its avowed purpose than any of the tracts which have preceded it. All these tracts are, at the same time, dearer. The small type and closely printed page of the catechism before us show that its benevolent and intelligent author is perfectly serious in his wish to extend a knowledge of horticulture to the humblest classes of society.

A Treatise on Roads; wherein the Principles on which Roads should be made are explained and illustrated by the Plans, Specifications, and Contracts made use of by Thomas Telford, Esq., on the Holyhead Road. By the Right Hon. Sir Henry Parnell, Bart., Honorary Member of the Institution of Civil Engineers, London. 8vo. London, 1833. 1*l.* 1*s.*

This work, worth all the other works that have appeared on roads put together, must soon find its way into the library of every country gentleman, land steward, and professional man. We recommend all head gardeners to procure the reading of it as soon as possible. They will find in it the erroneous points of Macadam's system detected scientifically; and one of the most beautiful and perfect systems of ascertaining the state of a road, as to the powers of draught required on it, its state of repair, &c., that can well be imagined. The best roads in France, and especially in Lorraine, are formed exactly as recommended by Mr. Telford.

FRANCE.

Le Jardin Fruitier; Histoire et Culture des Arbres Fruitiers, des Ananas, Melons, et Fraisiers, &c. Par M. L. Noisette. 2d edit. In monthly 8vo. Nos., with coloured plates, 5 francs each. Paris, 1833.

Annales de Flore, et de Pomone; ou Journal des Jardins et des Champs, par une Réunion de Praticiens. In monthly 8vo. Nos., 3 francs each. Paris, 1833.

Flore des Serres et des Jardins de Paris, au xix^{e} *Siècle.* In monthly 8vo Nos. Paris, 1833.

HOLLAND AND THE NETHERLANDS.

Fête Jubilaire Salon d'Hiver, 1834. *50me Exposition Publique de la Société Royale d'Agriculture et de Botanique à Gand.* Pamphlet, 8vo, 49 pages. Ghent, 1834.

This pamphlet consists of lists of the plants exhibited, with names of the exhibiters, or supposed exhibiters. As a custom not uncommon on the Continent, we may mention that funereal cypresses were exposed in the hall of exhibition, in honour of the memory of certain gardeners or amateurs of gardening deceased during the past year. The names of the exhibiters are given alphabetically, and under each name a list of the flowers said to be exhibited by them. Among the names of the exhibiters occurs that of the Duke of Bedford, who is styled *Cultivateur-Agronome à Londres.* His Grace is said to have exhibited *Araucària* excélsa and Bánksia latifòlia; Mr. Coke, *Culti-*

vateur dans le Comté de Norfolk, to have exhibited *A*càcia verticillàta and Azàlea índica phœnícea; and Mr. Low of Clapton, *E*rìca mutábilis and Mùsa díscolor. Mr. Neill, the Duke of Hamilton, Sir John Sinclair, Mr. Sabine, Mr. Spence the entomologist, who is styled *Directeur du Jardin Botanique de Hull*, Dr. Wallich, and the names of some other Britons, were also among those of the exhibiters. The reader of this pamphlet may very naturally suppose that plants were sent to the Ghent exhibition by the British parties mentioned; but we will venture to assert, that by none of the persons above mentioned was a single plant sent to the Salon d'Hiver in 1834. The custom of putting down what are considered great names as the senders of plants to exhibitions of this kind is a sort of pious fraud, not uncommon either in the Netherlands or in France. We detest it, and wish that we could, by exposing the practice, excite a similar feeling against it in the breasts of all other horticulturists.

Méthode nouvelle, facile, et peu coûteuse de cultiver le Champignon, &c.: A new, easy, and economical method of cultivating the Mushroom, founded on numerous experiments, and suitable to every description of locality, not even excepting the interior of apartments. 12mo, 28 pages; two plates. Brussels. No date.

In the introduction, the author informs us that Brussels, during six months of the year, is chiefly supplied with mushrooms from Paris; and that spawn, also, is generally obtained from that city. Being a great lover of mushrooms, he was desirous of obtaining them more easily; and, for this purpose, he sought for information on the subject of their culture in books, by observation, by travel, and by conversing with cultivators. He does not seem to have had recourse to English works; but an Englishman gave him directions how to make spawn. By observation he found that too much humidity and too much dryness alike destroyed the mushroom spawn, whether in pastures or in artificial beds. He found that, if much rain fell in May and June, there were very few mushrooms to be found in the meadows in the September following. He also found that watering a mushroom bed immediately after it was made destroyed the spawn, as did exposing the bed to the full influence of the light and air. In the course of a tour in Germany he learned what he considers his best mode of producing spawn; which is by the use of short horse dung with a little dry cow dung; these being mixed together, the mass is pierced with holes, into each of which a little bran of wheat and a pinch of sal ammoniac is put. He concludes his chapter on making spawn by observing, that, if the farmers and stable-keepers of Belgium knew how to cultivate mushrooms, they might soon become so abundant throughout the year, as to be within the reach of the poorest citizen. This is an excellent idea, and we wish we could impress it on the minds of stable-keepers in England, and, indeed, everywhere. Why should not every hostler grow mushrooms? It might be one of his perquisites; and it would only occupy the hours he now spends in the tap.

Perhaps the only idea in the tract which is new to the English gardener, is that of employing the dried powder of cow dung as a surface dressing to mushroom beds, and, after it is laid on, watering it with water in which nitre has been dissolved, at the rate of two ounces of nitre to the water intended for four square feet of ground. The use of nitre, the author says, is an invention of his own; and he thinks that it not only produces a more abundant crop, but one eight or ten days earlier.

He grows mushrooms in boxes, drawers, and in all the different modes enumerated in our *Encyc. of Gard.* (§ 3813. to § 3880., edit. of 1834), and he goes even so far as to cultivate them on the shelves of presses in stables or cow-houses, in cellars, in garrets, in closets under stairs, in old chests of drawers, in bedrooms, and under stages of flowers even in drawing-rooms; in short, wherever he can find room for a drawer or box 7 in. deep.

To preserve mushrooms fresh for a few days after being gathered, he puts them in a flower-pot among dry sand, and sets it in a cool place. To preserve them for several months, he first dries them a little, next coats them with butter, and then immerses them in jelly in a gallipot, covering them with melted suet, and tying a piece of bladder over the mouth of the pot.

Catalogue d'une Partie de Plantes existant en Double au Jardin de la Société Royale d'Horticulture des Pays Bas, et qui sont à échanger ou à céder. Small 8vo, 18 pages. Brussels, 1830.

This idea of printing a catalogue of duplicates for exchange seems a good one, and one which, if it were not for the expense, might be adopted in this country. It must not be forgotten, however, that the plan of exchanges is always indicative of a state of society where money is scarce; and therefore we hope it may never become general in Britain. At the end of this catalogue it is stated that the society have always on hand a large stock of pine-apples, both plants and fruits; also mushrooms, forced salads, and other vegetables, fruits, &c. They also possess a complete collection of fruit trees, which they propagate for sale or exchange, and guarantee the fidelity of the plants to their names.

Section Botanique. Extrait du Catalogue de J. F. Vandermaelen Genre. 12mo. Brussels.

At Brussels there is an establishment for the engraving and printing of maps. This manufacture is carried on in a villa in the suburbs of the town, and this villa contains several hot-houses. It appears from this little catalogue that the plants kept in these hot-houses, which are chiefly pelargoniums, are proposed to be exchanged for articles connected with geography or natural history. An account of this *Etablissement Géographique* was published in 1831, in a thin volume, royal 8vo, accompanied by maps, plans, and views.

Catalogue Général des Pépinières de Vilvorde. Royal 8vo. Brussels, 1833.

Catalogue des Pépinières de Perck, par Vilvorde et Dieghem. 8vo. Brussels, 1833.

Prix-Courant des Plantes disponibles en 1834, *chez L. Jacob Makoy, Horticulteur, à Liège.* 12mo. Liège, 1833.

Of the above three catalogues, lent us by Mr. M'Intosh, the first is the richest in fruits, and the last in house plants. Indeed, M. Makoy's collection may be considered as one of the richest on the Continent.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

An easy Method of ornamenting the common Flower-pot. — The pattern is drawn on the pot with a black-lead pencil; and, when the figure is large, it may be cut out in pasteboard, and, being laid on the pot, the pencil may be carried round the edge of the pasteboard as a guide.

The black used is the common varnish, called Brunswick black, which is sold at every oil-shop. It is laid on with a camel-hair pencil, and about a teaspoonful is sufficient for one flower-pot: while using, it should occasionally be diluted with two or three drops of spirits of turpentine. Black sealing-wax dissolved in spirits of wine will also answer, and may perhaps be preferred by ladies, but it is more expensive. *E. C.* — *London, March,* 1831.

The Tea Plant. — In a speech delivered by Sir G. T. Staunton, March 18. he observes, that the names congou, bohea, and souchong, were not given to teas by the Chinese, who merely described their teas as inferior, middling, and superior. He adds, that all the black teas imported into this country, with a very small exception, were produced by the same plant, and in the same district, viz., that of Bohea. The literal meaning of the term "congou," in the Chinese, is "prepared or manufactured," and the meaning of "souchong," is "selected." (*Morning Post*, March 18. 1834.)

The Zante Currant. — The fruit of this plant is generally believed to be seedless; however, this is not altogether correct. Generally there is found a berry in each bunch, near its upper part, twice and often thrice the size of the others, which only contains a single seed. This is curious, and, I believe, has escaped common observation. — *F. Huthwaite. The Tower, London, June* 6. 1834.

Art. II. *Foreign Notices.*

FRANCE.

Paris, April, 1834. — After a January and February of almost unexampled mildness, we had at last winter in March: short, it is true, but tolerably severe. From the 12th to the 20th of March, it froze every day; and on the 16th and the 19th, it did considerable mischief to vegetation. A sharp, drying wind continued nearly the whole month; and the country in the first week in April was not half so beautiful or so spring-like as it was in January. Our agriculturists have been lately much annoyed by a spurious kind of manure, which has been sold under the name of the *noir animalisé*, but which does not contain either blood or any of those animal matters which have rendered the true *noir animalisé* so valuable as a manure. The adulteration is made with the black earth of Picardy, and the fraud may be detected by making a small quantity red hot in a shovel, and then suffering it to cool. If pure, the cinders will be grey; but if adulterated, they will be streaked with reddish particles. The Horticultural Society of Paris having obtained permission to make use of a large room in the hôtel de ville (town hall), held their first winter exhibition there on Sunday, March 2. The number of flowering plants sent was greater than could possibly be received; and the crowd that came to see them during the four days that the plants were exhibited, was great beyond what it has ever been on any former occasion. The novelty of a winter flower show had, no doubt, some share in producing this numerous attendance, but the beauty of the plants exhibited was such as to render any other reason unnecessary. M. Neumann, foreman of botanic hot-houses in the *Jardin des Plantes*, has received the Horticultural Society's large medal of encouragement. M. Neumann is quite a young man, only thirty-four, but he has seen a good deal of his profession, having been sent by Professor Thouin to the Isle of Bourbon, where he remained three years, and whence he brought a rich collection of plants in 1824. — *J. F.*

GERMANY.

The late Professor Kerner's Works. — In consequence of the death of the professor of natural history here, the celebrated Jean Simon de Kerner, some copies of his magnificent works are to be sold, at moderate prices, by D. C. Kerner, *Rue de la Couronne*, at Stuttgard, his son. These works are:—1. J. S. de Kerner Genera plantarum selectarum iconibus illustrata, 10 vol. avec 200 tables, imp. fol. papier vélin anglais; hauteur 2′, largeur 1′ 5″ 6‴, pied de Paris. Sur chaque dessein l'auteur a trace l'analyse exacte de la fleur, qu'il répresente, tel que du calice jusqu'à la poussière séminale et l'embryon, même toutes ses parties anatomiques sont dessinées avec la plus grande précision; et l'imitation parfaite des formes de chaque plante et la vivacité des couleurs, auxquelles il avait le talent de donner l'éclat de la nature, impriment à ces desseins, tous faits par lui même, le mérite d'un ouvrage original. Chaque dessein est accompagné d'une feuille de texte en latin, contenant en détail la description de la plante, ses synonymes, son espèce, sa patrie, et l'explication de l'analyse. 2. J. S. de Kerner, Hortus Sempervirens, exhibens icones plantarum selectarum, quasquas ad vivorum exemplorum normam reddere licuit, 71 vol. à 12 tables. Desseins, papier vélin anglais, format et texte imprimé en latin, comme dans l'œuvre précédent. Les 852 tables, qui composent cette partie, forment une collection des plantes les plus rares et les plus belles des Indes Orientales et Occidentales. 3. J. S. de Kerner, le Raisin, ses espèces et variétés, dessinées et colorées d'après nature, 12 livraisons en 1 vol. contenant 144 tables, imp. fol., hauteur 1′ 9″ 4‴, largeur 1′ 5″ 4‴, texte imprimé en français. Chaque table représente, outre l'espèce, le détail de toutes ses parties. 4. J. S. de Kerner, les Melons, 34 tables en 1 vol. même format et texte, imprimé en français, représentant les principales espèces de melons."

Our correspondent adds :—" M. Kerner was a man of great talents, and of the highest degree of merit in his department of science. His works are most beautifully executed; but, from their great size and cost, copies of them are only to be found in imperial or royal libraries. Perhaps some of your lords, or your public institutions, might desire copies; and, if so, as they are not sold through the booksellers, they can only procure them by applying to M. Kerner, as above. I am informed that the price asked will be very moderate, and much less than the works could have been obtained for in the late M. Kerner's lifetime." — *Charles Zoller. Stuttgart, May* 17. 1834.

Plants in the Garden at Hurlach, near Augsburg, brought from Mexico, in the spring of 1834, by Baron Karwinsky : — Agàve atrovìrens, variespìna, *I'xtli*, sobolífera, láxa, fláccida, serrulàta, Espadìtas, brachystàchya, and tehnacanénsis; Fourcrœ'*a* longæ'va and rígida; *A'*loë *Sabílla*; Cèreus canaliculàtus, ramòsus, gemmàtus, and baxànus; Epiphýllum látifrons, longifòlium, speciòsum flòre rùbro, and flòre lùteo; Testudinària elephántipes macrophýlla; *E*uphórb*ia* fúlgens and heterophýlla; *Yúcca* striàta, comòsa, and lætevìrens; Chamædòrea, species; Coco yule, a palm from the coast of the South Sea; Báctris aculeàta, Passiflòra *Granadílla*. — *C. Rauch. London, June*, 1834.

ART. III. *Domestic Notices.*

THE Show of the Metropolitan Society of Florists and Amateurs, held at the Crown and Anchor Tavern on June 10., was, as we have learned from friends who attended it, one of much merit, and one which evinced, both in the productions exhibited, and the number of visiters to inspect them, an improvement on the previous shows. The flowers of the heartseases, ranunculuses, pinks, and other flowers from the open air, were deemed small, and their smallness attributed to the dry weather which had preceded; but they were generally, otherwise, in fine condition. The heartseases were numerous, and of excellent quality: they had a light, lovely appearance; compared, by one friend, to a multitude of beautiful butterflies. The pinks were not very numerous, but were very good. The ranunculuses were beautiful: there were several stands of flowers, and some individual ones, shown for prizes; and, besides these, Mr. Groom displayed, not for a prize, a fine collection of about fifty kinds; and Mr. Hogarth, also, a collection. Of roses there were five or six collections for prizes, and one or two large collections besides. Of pelargoniums there were from 150 to 200 fine specimens of choice and new kinds: one with crimped petals, and called Buonaparte, attracted much notice. Among the choicer kinds we may name grandíssimum, Gains's pulchérrimum, Smith's magniflòrum and Admiral Nelson, fúlminans, new Duchess of Gloucester; and the following kinds, sent by Mr. Dennis: — Queen Adelaide, habránthum, Adansòni, olýmpicum, concéssum, and some seedling kinds, not yet named, of high qualities. Of miscellaneous objects we are told of the under-mentioned: — A superb specimen of Kálm*ia* latifòlia, contributed by Mr. Waterer, of Knap Hill: the plant was tall, large, and covered with flowers. Pimelèa decussàta, supplied by Mr. Lowe, of the Clapton Nursery; a plant 4 ft. high, garnished all over with heads of flowers. *P*olýgala oppositifòlia, a plant 5 ft. high, and abounding in blossoms: this, with Schizánthus retùsus, and some excellent heartseases, were supplied by Mr. Mountjoy, of the Hanwell Nursery. Cèreus speciosíssimus, some plants of, one of them large; and C. Jenkinsòni, and other hybrid kinds. *Petùnia* phœnícea, a fine plant of, by Mr. Gains; and a plant of the lilac-corollaed variety, by Mr. Dennis. A Cypripèdium, in a pot; our informant believes, C. Calcèolus. Cut stems (six or eight) of C. spectábile, from Mr. Dennis; three of them bearing two flowers each. A basket of about twelve plants, in 60-sized pots, the pots hidden by a covering of moss, of Apheléxis hùmilis? were a very lovely object; as was a similar basket of plants of *E*rìca ventricòsa? Of another species of *E*rìca there was a fine single plant. Four fine plants of *S*empervìvum tabulàre, not in flower, but in a condition to show best their tabular appearance, were striking to town visiters. There was a very large plant of Calceolària Tàylori; and Mr. Dennis exhibited a hybrid originated from Fothergílli, fertilised by C. péndula: its lip is prettily spotted and lined. Besides all these, there were ixias, gloxínias, and numerous other kinds of plants. The cut flowers were not very numerous: amongst these, stocks and larkspurs were predominant. Town visiters regretted that not more of the plants were labelled. — *J. D.*

The Warwickshire Floral and Horticultural Society offer their large silver medal, value 2*l.*, for the most complete *Hortus Siccus*, which shall be exhibited at the sixth exhibition, to be held in Birmingham in November next. Specimens to be sent to the secretary [we believe, Mr. W. Darke], carriage paid, and they will be carefully returned after the awards are adjudged. — *Henry Kendal, Treasurer, Birmingham, May* 28. 1834.

Wakefield Subscription Botanic Garden. — Mr. William Barrett, nursery and seedsman at Wakefield, appears to have made such arrangements in his nurseries, as to give them the character of an ornamental garden, combined with a botanical one; and this is found to be a great accommodation to his neighbours. The terms of admission are remarkably low: viz., for a family, 10*s.* 6*d.*; single subscribers, 7*s.*; and each subscriber to be entitled to plants of the value of one half of his subscription. Subscribers of 1*l.* 1*s.* each will be allowed plants to the whole amount of their subscription. According to a list published in the *Wakefield and Dewsbury Journal*, May 23., the collection is ample, and the prices are uncommonly low; the finest named pelargoniums may be had at from 6*d.* to 1*s.* 6*d.* each, and upwards of a hundred of named heartseases at from 4*d.* to 9*d.* each. Twenty-one sorts of Fúchs*ia*, at from 6*d.* to 1*s.* 6*d.* each; and F. longiflòra (lately sold in London at 20*s.* and 10*s.*) for 2*s.* 6*d.*

A Horticultural Society at Hackney. — About a year ago a Horticultural Society was formed in this neighbourhood, which you probably have heard of, and in November last a Horticultural Reading Society was established at Stamford Hill, the rules of which you have seen, and which, I am happy to inform you, has succeeded beyond expectation. The number of its members exceeds sixty, and many of them are respectable tradesmen altogether unconnected with gardening. Now, Sir, what I have to complain of is, the treatment, not only which our society has experienced from the other, but the treatment the gardener receives from the members at their shows or exhibitions. For example, no gardener or nurseryman is admissible as a member, and the prizes are awarded to the lady or gentleman from whose garden the articles are produced; who may, if they think proper, hand the sum so awarded to the gardener at the end of the season. This is not all: when the poor fellow carries his flowers, &c., to the show or exhibition, he is not allowed to enter the room, but they are taken from him at the door, and he must either go home to his work, or wait until the prizes are awarded and his master or mistress, with the other ladies and gentlemen, have satiated themselves with examining the flowers and vegetables, and scrambling for the fruit, which he and his brethren have been exerting themselves to the utmost to bring to perfection. [As the remainder of this communication consists of details of a local nature, the publication of which could be of no use to our readers generally, we have omitted it.] — *G. Geddes, Hackney, May* 27. 1834.

SCOTLAND.

Tyranny towards Gardeners. — One of our readers, remarking on what we have stated, p. 162., respecting the tyranny of Russian noblemen, informed us of a fact which we could not have believed possible; viz. that, at a place in Perthshire, where he was journeyman a few years ago, the gentleman, who has died since this was written, would not allow his servants to see any newspaper, notwithstanding they paid for it, unless it was one of a certain tone in politics, which they were compelled to purchase, if they wished to have a newspaper at all. The same gentleman forced every servant, whether in-door or out-door, whatever his religion might be (and several of them were sectarians), to go to the parish church in the forenoon. Of course, before they could return, and get their dinners, it was too late to go to their respective chapels for the afternoon service.

Art. IV. *Calls at Nurseries and Suburban Gardens.*

Claremont. — *May* 15. The leaves on the forest trees being now fully expanded, without excepting (in consequence of this early season) even the ash and the acacia, this place is in its greatest summer's beauty. About the end of October, when the foliage of the oaks has assumed all that variety of brown and red of which it is susceptible, and the elms their rich yellows, Claremont will be in the height of its autumnal beauty: at about Christmas, when the splendid hollies, with their coral berries, bays, Portugal laurels, box, laurustinus, silver firs, cedars, &c., and, above all, the undergrowth of the common laurel, give it the appearance of a wood of evergreens, it is in its greatest winter beauty. In the winter season, indeed, Claremont looks better than at any other time, on account of its profusion of magnificent evergreens, and its undulating surface of turf, green all the year round, from the shade above and the moisture beneath. Altogether, it is a noble place; it is only to be deeply regretted that it is not also a healthy one to live at. If the place were thoroughly drained by the frequent drain system (IX. 447.), and the ponds filled up, with a few more of the trees cut down, and more of the surface cleared of underwood, there can be little doubt that the salubrity of Claremont would be greatly increased.

The main entrance to the kitchen-garden, for the family residing in the mansion, or for strangers, is through the gardener's house; the ample passage across which serves as a telescope to the view along the broad walk of the garden. This was, no doubt, an arrangement of Sir John Vanbrugh, made with a view to effect, though the privacy of the dwelling is utterly destroyed by it. The garden walls were also built by Sir John Vanbrugh; and we suppose that, in his days, the feelings of out-door servants were not so much thought of as they are at present. The kitchen-garden commences with a small flower-garden, laid out, and, in part, planted, during the time of the late Princess Charlotte. A circular clump of azaleas, said to have been planted by the princess's own hands, is now in full bloom, and makes a very splendid appearance. The azaleas in this clump form one grand irregular tuft; and, in order to prevent this irregularity from degenerating into a tame orbicular mass, which it soon would do, Mr. M'Intosh proposes to adopt Mr. Garnier's mode (p. 124.) of taking up the plants, cutting them in a little, and then replanting them farther apart from each other. The basin in this garden, the side walls of which are built of brick, and lined with cement, having leaked for some years past in its upper part, that part has been recently covered with lead, let in under the coping, and into the stonework at the bottom; and the water is now effectually retained. As a substitute for a shelf round this pond, Mr. M'Intosh has adopted a most convenient pothook; by lengthening or shortening which, the pot containing the plant can be suspended at any depth, and taken out and examined at pleasure. *Fig.* 64. shows a perspective view of the hook; and *fig.* 65. a section of the pond, showing the hook in its place, with a pot in it. In this figure, *a* is the hook resting on the coping of the wall of the pond; *b*, the surface of the ground outside the pond; *c*, the surface of the water in the pond; and *d*, the bottom of the pond.

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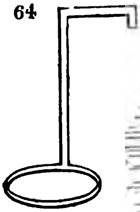

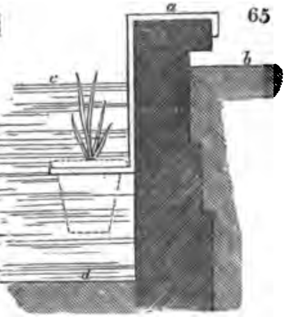

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In this garden are some fine old specimens of cedars, Magnòl*ia* grandiflòra, *P*ìnus *Cémbra*, Gymnócladus canadénsis, Koelreutèr*ia* paniculàta, Halès*ia* tetráptera, now finely in flower, and a number of others. Among the half-hardy things, we found strong bushes of *G*nídia símplex. A plant of *A*nagy̆ris is now beautifully covered with bloom. When will this beautiful tree, the Judas tree, and the snowdrop tree, become as common about London as the laburnum? Plants of the former are now almost as cheap as those of the latter; and they would be cheaper if they were more in demand. Would that we had a society exclusively devoted to the dissemination of ornamental trees and shrubs! The way for such a society to accomplish its object would be, to employ gardeners to carry about dried or living specimens of the different kinds of ornamental trees and shrubs; and to point out to the possessors of gardens, pleasure-grounds, and parks, those which would thrive best in them. About London, specimens in pots or baskets might be taken round in carts, at the season when they were in flower. We have before suggested this for Magnòl*ia* conspícua, Wistàr*ia*, *C*aprifòlium sinénse, Chimonánthus fràgrans, *Ribes* sanguíneum, and a few others. All the American shrubs, and other shrubs having hair roots, which are planted in peat earth, admit of being taken up with balls, when they are in full flower, without the slightest injury, and sent in that state to any distance. Perhaps the time may come when the flower-markets of London will be supplied in this way, from distant country nurseries, by means of the railroads. The Portsmouth railroad, it is said, will pass near the Knap Hill Nursery, and through that of Goldworth. It would then be easy for Mr. Waterer and Mr. Donald to supply London with magnificent specimens.

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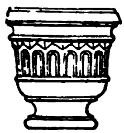

In the flower-garden at Claremont there are a number of handsome vases of Maltese stone placed along the sides of the main walk, and on the coping of the wall of the basin; but these vases are without plinths, as in *fig.* 66. This is a very common error even among architects; and it is not, therefore, surprising to find it general in gardens and garden scenery. It is bad; because there is an obvious want of connection, and of a character of art, between a highly artificial article like a vase, and mere turf, dug ground, or even the plain coping of a wall. When vases are placed along walks, therefore, they ought not only to have plinths (*fig.* 67. *a*), but pedestals (*fig.* 68. *b*); with or without plinths at the base (*c*), according to the richness or simplicity of the scene. The reader who has visited the gardens of St. Cloud, near Paris, on a fête day, will probably recollect the vases on the margins of the basins there. All of them have plinths, like the one shown in fig. 67. p. 214. Vol. IX. As a general guide for the gardener, in this and in all similar cases, he may consider it as a fixed principle, that no work of art should be set down on the ground, in gardens or pleasure-grounds, or among natural scenery, without some

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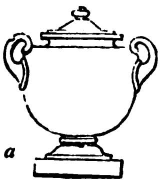

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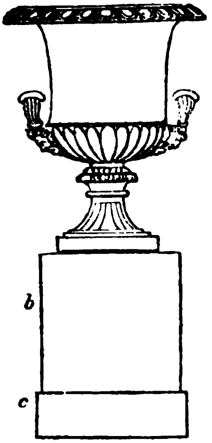

kind of artificial preparation or substructure. It would not only be revolting to good taste to see a statue set on the bare ground, but even a bench or seat which had the character of being fixed, or even comparatively so; such, for example, as the benches in Hyde Park and in Kensington Gardens. There ought always to be a visible foundation of masonry under the legs or supports of such benches. No garden wall, no front wall of a hot-house, no wall even of a pit, unless, indeed, it is a turf wall, ought to rise abruptly from the ground without showing a plinth or basement. This basement may be produced by a set-back of even a quarter of an inch, which would neither create additional expense, nor impede, in the slightest degree, the training of wall trees. Persons connected with building and gardening, whether in the way of employers or employed, have much to learn in matters of this kind; and greatly will their enjoyment, from looking at architectural objects, be increased, when their minds are once imbued with this description of knowledge.

In some of those interesting architectural recesses which were formed in the garden walls here, by Sir John Vanbrugh (about 6 ft. wide, 2 ft. deep, and about 5 ft. higher than the general height of the wall), Mr. M'Intosh has planted Coe's golden drop plum, with the intention of covering the front of the recess with glass or mats after the fruit is ripe, in order to ascertain how long it can be preserved on the tree fit for use. In the culinary hot-houses we found, as usual, excellent crops of pines and grapes. When we last went through them, on the 23d of August, 1830, we saw an Enville pine plant, eighteen months old, with a fruit 18 in. in circumference, and 13 in. high. Mr. M'Intosh then promised to send us an article on the advantages of cultivating pines in hotbed frames rather than melons; and which article we still expect to receive from him. In the plant stoves there was the most healthy and vigorous vegetation; and among the rare plants was Omalánthes *p*opulifòlia, of which there are only one or two other specimens in the country. There are here the male and female Testudinària elephántipes. The orchideous epiphytes are very luxuriant; and Calánthe and Oncídium, with Gongòr*a* and others, were in flower. Quisquàlis índica (now in bloom, and perfuming the house with its fragrance), Mr. M'Intosh informed us, retains the freshness of its flowers longer in crowded rooms than any other plant he knows, and is not liable to drop its petals. It may be used (he says) a second and even a third evening; and there are but very few other plants, except the everlastings, that can be used more than one evening. The Camél*lia*, however, when not too fully blown, will sometimes retain its petals two evenings. Dr. Courtois, who visited Claremont in 1833, says, of this plant of Quisquàlis, and one of Poívre*a* coccínea in the same stove, that their garlands, intertwined, presented to him a most enchanting sight: the one, by its plumes of scarlet flowers nearly a yard long; and the other, by the abundance and sweetness of its blossoms. (*Magasin d'Horticulture*, No. x.)

Along the front of this hot-house there is a border of sandy heath soil, in which are planted a great many Cape and other bulbs, and various green-house plants, with a view to prove their hardiness. Mr. M'Intosh has promised us a list of those which he finds will stand through the winter; among them we found *Loàsa* nítida in bloom, and not in the slightest degree injured in its foliage. In a pit, we were shown the cochineal insect thriving on plants of Opúntia cochinillífera: it had been tried on the allied species without success. Here Mr. M'Intosh has propagated Bignòn*ia* grandiflòra successfully from single eyes, exactly as is done with the common vine: a fact worth knowing by nurserymen, who generally propagate it by cuttings of the roots, or by layers. There can be no doubt that many plants, more especially climbers and trailers, may be similarly propagated. We would suggest to nurserymen who have arboretums, to try pots of buds of every species whatever, deciduous or evergreen, resinous or non-resinous; burying the bud from a fourth of an inch to one inch, according to the diameter of the shoot to which it is attached. Some buds ought to be put in during the autumn, others in the spring; some in young wood, others in old wood; some, such as those from the young wood, forwarded, immediately after they are put in, by artificial heat; others, kept several weeks or months in the cold, and afterwards so forwarded; others, and, perhaps, the greater number, might be put in under hand-glasses, and left to the influence of the seasons. We are still in the infancy of our knowledge as to the extent to which propagation by buds and cuttings may be carried by art. We have always recommended the young gardener to adopt it as a principle, that every bud may be rendered a plant; and that all plants, whether originated from buds, cuttings, or seeds, are essentially the same in point of natural properties, susceptibility of duration, propagation, &c. We know that, in this opinion, we differ from high authorities, and we acknowledge that there are numerous anomalies and exceptions; but we have almost all the Continental physiologists on our side, and also some of the first botanists and cultivators in this country.

Among the green-house plants we found a large specimen of Lambértia formòsa, in flower; a new Hàkea, 47 sorts of *S*empervìvum, numerous mesembryanthemums, aloes; and, altogether, we believe, the best collection of succulents in England. Many of these Mr. M'Intosh collected during the eight months which he lately spent at the palace of Läcken, near Brussels. While there, he (by the kind permission of King Leopold) visited all the principal private and public gardens in the Netherlands; and we only wish that we could persuade him to give us some account of them.

Among a fine collection of alpines, we found Azàlea procúmbens, Linnæ'a boreàlis, Córnus suécica, and such like rarities, in great vigour; and Sarracènia purpùrea finely in bloom.

Leaving the kitchen-garden, after having inspected the recent addition to Mr. M'Intosh's garden library of a considerable number of French books (several of which he has most obligingly lent us to review in this Magazine), we proceeded to the mansion by the regular approach. Looking up to the portico, the effect is very fine; and we recollect the impression it made upon us, from the same point of view, and at the same season of the year, exactly thirty years ago. Looking from the portico over the park, Mr. M'Intosh pointed out a number of vistas which he had opened to the distant country; and also the rings of whitewash on the trunks of certain trees, which he had put on to enable him to see and distinguish them from different points of view, so as to determine whether or not they ought to be felled. It appears to us that the whole of the low part of the park at Claremont may be compared to a pond, and the trees to weeds in that pond. The moisture, which has evaporated from all the undrained rising grounds, descends, by its gravity, into this basin; and the trees, by their number and magnitude, prevent it from being emptied by the sun and wind. There is, we believe, but one very small natural outlet to this basin, on the east of the village of Esher. This outlet belongs to another proprietor, and is also choked up with trees; so that there is no hope of removing the malaria from Claremont but by removing the trees from the lower part of the park, so as to admit the full influence of the sun and wind.

The views of the grounds, and of the distant country from all the four fronts of the house, have been opened up, altered, and greatly improved, by Mr. M'Intosh; who has given, at Claremont, as striking proofs of his taste and judgment in landscape-gardening, as he has of his skill in horticulture. The formation of an underwood of laurels, by laying down the long straggling branches of the old plants, so that they now completely cover the surface, is one of the most masterly things of the kind that has been done anywhere.

The eye now penetrates deep into the grove over these laurels in all directions, presenting, at every step, a new combination of trunks and stems; of tall trees and hollies; and of open spaces among them, farther varied by the manner in which the light penetrates through the branches above, and glances on the shining laurel leaves below. Among the innumerable fine hollies here, there is one, with two stems, 70 ft. high. There are groves of cedars of Lebanon, some branched in consequence of being planted in open spaces; and others drawn up with a clean trunk, from having been surrounded by other trees. The clean trunk of one specimen is 100 ft. high. There are many of the cedars with clean trunks of 60 ft., which, if now cut down, would saw up into as good planking as any larch or Scotch pine. We have before (V. 568.) made a similar remark respecting the cedars at Ascot Place. There is a fine hemlock spruce, 50 ft. high, and with a trunk 8 ft. or 9 ft. in circumference at the height of 4 ft. from the ground. There is a very large cork tree, with a trunk 3 ft. in diameter, and the breadth and height of the branches 30 ft.: this tree produces acorns every year. There are many large tulip trees, liquidambars, red cedars, cypresses, &c.; a Quércus *I'*lex is 30 ft. high, and has a trunk 1½ ft. in diameter; several hollies are 60 ft. high, many Portugal laurels 25 ft. high, and numerous common laurels, before they were laid down, were 30 ft. high. Many of the cedars have trunks from 6 ft. to 12 ft. in circumference; and one in front of the house is 100 ft. high, with a trunk 16 ft. in diameter.

A fine mossy avenue leads to a prospect tower; from which the views have been lately opened up and much improved by Mr. M'Intosh. Among the new articles introduced in the conspicuous parts of the walks, and generally near laburnums, are upwards of two hundred wistarias. Descending to the conservatory, we found it stocked not with ragged orange trees, as when we saw it before, but with choice green-house and hot-house plants in flower; it being, in fact, the show-house of the place. It was really exceedingly beautiful to the eye; and was filled with the fragrance of a very large plant, 15 ft. high, of Magnòl*ia* fuscàta. The flowers of this plant used to be gathered for perfuming the rooms at Marlborough House, like those of the Chimonánthus fràgrans. Some of the large acacias in this conservatory were covered with seed-pods. On the floor bordering the walk are sunk stone troughs, so as to form hollow panels, which were planted with mesembryanthemums mixed with Lycopòdium helvéticum: this had a very beautiful effect, several of the mesembryanthemums being in flower.

Descending, we found the dried male catkins of the beech swept into heaps; and learned that Mr. M'Intosh collects these, dries them, and preserves them for packing fruit. They are as soft as cotton, and do not communicate any kind of scent to the fruit. We next came to a glade, rendered interesting from the circumstance of the Duke of Newcastle, when proprietor of this place, encouraging his servants to play at skittles there, himself sitting in an arbour, smoking his pipe, and enjoying their sport. Farther on is a Gothic temple, raised to the memory of the Princess Charlotte; and in front of it are two plants of Cunninghàm*ia* lanceolàta; which, in 1830, had been there eleven years, without protection, and were then the one 7 ft. and the other 13 ft. high. They are still in the greatest vigour, have grown at about the same rate, and received no care except knocking off the snow, by which operation the tallest has lost its leader. Near these plants is an Eriobótrya japónica, 12 ft. high; and a *C*ístus cýprius, 10 ft. high. In descending to the lake, Mr. M'Intosh pointed out to us several parts of the original plan of Brown, which he had restored: a mode of improvement highly to be commended, both in justice to Brown and to Claremont. It is seldom that the plan of a grown-up place can be advantageously altered; and an unsuccessful attempt deprives it of the associations connected with past times. These associations may, at first sight, appear to be chiefly connected with buildings; but, in fact, they are still more deeply and powerfully produced by very old trees, and especially by old exotics. Claremont will be visited for its cedars, its hollies, its laurels, its wistarias, and its other fine specimens, when the present house, offices, and kitchen-garden walls are, perhaps, rased to the ground, or have ceased to become objects of interest.

On the whole, we were much gratified with our visit. The more we know of Mr. M'Intosh, the better we like him; and we feel gratified that so good a man, and one of so much taste, should have so good a master, and one who can so well appreciate his merits, as the King of the Belgians.

Goldworth Nursery. — *May* 16. Mr. Donald's arboretum has, as may be supposed, made great progress since we last saw it in November, 1831. Commencing with *R*anunculàceæ, we found the plants 20 ft. high, and two atragenes in flower. All the magnolias have stood out perfectly. The four evergreen mahonias are now considerable bushes, and two of them promise to ripen seeds. Passing rapidly on to *A*'cer, we found a beautiful variety of the common sycamore, with the undersides of the leaves becoming purple, like those of the *D*iospy̆ros. The brooms, and the genus *C*ýtisus, present a fine display of blossom, particularly the silvery-looking species of broom from the Azores, the *Retama,* here named *S*pártium créticum. There is a large collection of *C*istíneæ, forming brilliant masses of rich colours, relieved by whites. Among the *R*osàceæ we found *S*órbus nipalénsis, without a single bud expanded, though the leaves of the British species, and also of every species of ash, and of the red and white mulberry, were fully developed. On returning to Bayswater on the 21st, we found our own tree of *S*órbus nipalénsis in a similar state. Its buds opened on the 25th, and the first leaf was not fully expanded till June 5., when robinias, and all those trees usually considered the latest in England, had made shoots of an inch or two in length, and the fruit of the mulberry in the same garden was set. As far as we know, therefore, this is the latest hardy tree in Britain. It retains its fine yellow leaves as long as the beech or the hornbeam; and sometimes through the whole winter. Its lateness in leafing may perhaps render it a desirable tree for being planted among delicate undergrowths, which flower early in spring, such as azaleas, many kinds of bulbs, &c. The *E*ríceæ, including the heaths, azaleas, rhododendrons, &c., next attract attention; and afterwards the ashes, the elms, and the oaks. The most beautiful-leaved ash is the Carolinian; the yellow-barked drooping ash, a most ornamental tree, of which there is a fine specimen in the Marylebone nursery, is wanting to the collection. If we might choose among the oaks here, we should fix on *Q*uércus palústris. No deciduous tree can surpass, for singularity and beauty, the horizontal-branched elm. The willows include almost all the species contained in the salicetum at Woburn Abbey, and were kindly presented to Mr. Donald by the Duke of Bedford. Among the pines we found *C*èdrus *Deodàra* doing well; *L*àrix microcárpa, three years from a layer, is now upwards of 10 ft. high, and is in all respects as perfect a tree as if it had been raised from seed. The leading shoot which it made last year is upwards of 4 ft. in length. There is a common larch near it, raised from seed, which has not grown nearly so fast. The *L.* microcárpa is the red larch of North America, where it attains the height of 80 ft. It is remarkable for the ponderosity of its timber, which is so great that it will hardly swim in water. Its cones are shorter than those of the common larch, and its leaves are narrower. *A*'bies Douglásii has grown faster than any of the firs, and here, as everywhere else where we have seen this tree, it promises to be a most valuable addition to our resinous timber trees.

When this arboretum has so far advanced as that the trees begin to blossom, it will then be time for nurserymen to think of raising improved varieties of ornamental and useful trees and shrubs, by cross-impregnation. We have not a doubt that superior varieties of all our common forest trees may be so raised; and our opinion is founded on the fact, that this holds good in every other description of vegetable production. Nature gives the species, and leaves it to man to improve it by cultivation; and of this cultivation, cross-impregnation is a most important part.

To his arboretum, Mr. Donald has added a fruticetum, or, if the term is preferred, a pomarium. This contains a dwarf and a standard of all the best sorts of apples, pears, cherries, and plums. The advantage of mixing the dwarfs with the standards is, that the latter are sheltered by the former when in blossom; and that both standards and dwarfs have more head room. Most of these trees are in a bearing state.

A herbaceous ground, arranged on the natural system, has been formed in borders exterior to each side of the arboretum; and it contains, though newly formed, all the species (with one or two exceptions) enumerated in Mr. Donald's very excellent sheet catalogue.

Mr. Donald has been very successful in propagating most of the trees and shrubs in his collection; so that the trade, and the public generally, can have no excuse for neglecting to profit by his public spirit and industry. The whole nursery was in the very highest order and keeping. Certain compartments are devoted to stools and stocks for grafting on, and these, of course, are always under plants of the tree kind; but the greater number of compartments in which seedlings are raised, and transplanted articles are kept till they are sold, are subjected to a regular rotation of, 1. Wheat; 2. and 3. Clover; 4. Potatoes or turnips; and 5. to 10. Trees; or some similar rotation. In this way the crops, both of farm and nursery produce, are most excellent; so much so, that a crop of clover, in the year 1833, was cut green three times in the course of the season, and produced not less than two loads an acre each cutting. This clover, which grew upon 1½ acre, maintained five horses from May 4. till Michaelmas. For the details, see Mr. Donald's account of it in the *British Farmer's Magazine*, vol. vii. p. 425.

Godalming. — *May* 17. We revisited the three gardens mentioned IX. 480., and are promised a view of one, and a ground plan of another, which was laid out by Mr. Varden. The one of which we expect to give a view is, both in itself, and with reference to the exterior scenery, as perfect a piece of garden landscape as can be found anywhere without the aid of a natural river or lake.

Milford Nursery. — Great alterations and improvements are going on here, and 74 acres are about to be added. We saw numerous new plants, but we shall say nothing of them here, because Mr. Penny has promised us regular monthly lists. In the arboretum we found some new species added, and the whole looking remarkably well.

Stroud House, the Misses Perry. — We found this place, as usual, a perfect gem of order and high keeping. A bed of peat earth shrubs in front of the house is beautifully covered with Hydrocótyle vulgàris, which forms a curious evergreen carpet under the azaleas. At Stroud House, the plants of hydrocotyle sprang up of themselves from the peat earth, but the idea of producing the same effect by art is worth recording.

Knap Hill Nursery. — *May* 19. The azaleas here, Mr. Waterer informs us, are about a fortnight earlier than usual, in consequence of which some of those sorts which come first into flower suffered a little from the frost. The time for the perfection of these early varieties was, however, gone by, and we could not have arrived at a happier moment for seeing in perfection the greater number of species. No language can convey an idea of the splendid masses of colour of every shade of red, pink, orange, scarlet, and yellow. Many of the varieties are very fragrant; some bloom without showing any leaves; others with a number of leaves; some are of vigorous growth, and attain the height of 10 ft. or 12 ft., while others seldom reach above 2 ft. We measured the corymb of blossom of one plant, and found it nearly 9 in. in diameter. Mr. Waterer pointed out a great number of very distinct varieties which he has raised from seed, and not one of which has yet received a name. There is no way, therefore, by which a person can make a complete collection of these beautiful shrubs, but by going down to Knap Hill, and examining them while they are in bloom. The magnolias and other Americans promise well. The stock of standard rhododendrons is most valuable, and we are persuaded that if a number of them were taken up, and put into tubs or baskets, and exposed for sale in London, they would be eagerly purchased by the possessors of small gardens. Since this was written, Mr. Waterer has adopted this idea, and has sent some most splendid specimens of Kálm*ia* latifòlia to the Horticultural Society's Show at the Chiswick Garden, June 10., for which he obtained the silver medal. There is a new variety here of *R*hododéndron, raised between *R*. caucásicum and *R*. arbòreum: the plants are bushes not above 18 in. high, and the flowers, which appear in the open air at Christmas, are of a deeper red than those of any other variety. It is perfectly hardy, and ought to be in every nursery, in order that it may be propagated and spread over the country in a short time. We have frequently praised the hedges here, of thorn, yew, beech, hornbeam, Portugal laurel, common laurel, holly, box, &c.; and we have now to mention two screens of the hedge kind, planted since our last visit. The first consists of apple trees, 10 feet high, trained like pyramids, or rather truncated cones, and placed so near together as almost to touch; the second of these hedges is of double-blossomed furze, which being planted on fine deep sandy soil, has grown most rapidly, and has produced one entire mass of rich yellow bloom. Among the deciduous trees we observed a beautiful new variety of weeping beech, the foliage of which we can safely say is very much larger, greener, and more glossy and beautiful, than that of the weeping variety commonly cultivated in the nurseries. It might, indeed, be taken for a different species; and this circumstance alone proves how much remains to be done in the selection from seedlings raised accidentally, and from the production by cross-impregnation of superior varieties of timber trees, as well as of fruit trees. An oak-leaved birch is also a variety, like the beech, newly introduced here from the Continent, and which we have not seen in any other British nursery. We also saw a distinct species of *Yúcca*, with leaves as large as those of the *Y*. gloriòsa, now coming into bloom, which is very early for this family. In the deep sand of this nursery, asparagus grows so well, without any manure, that Mr. Waterer assured us, that he had seen stalks of it an inch in diameter.

The Bagshot Nursery, at Bagshot, also belongs to Mr. Waterer. Both nurseries were commenced about thirty years ago; and, in both, the foreman of the peat-earth department, who planted the first stools, still continues in the same capacity. There is here a good stock of young American shrubs, and the ground is admirably situated with respect to peat earth and water. It might be made one of the first of provincial nurseries.

Bagshot Park Farm is, as usual, beautifully cultivated, and most scientifically and economically managed, by Mr. Burness. No one who does not understand the East-Lothian farming can fully appreciate the merits of the system pursued here. All the crops are drilled; and, by the force of bone manure, which is drilled in along with the seeds, good crops are raised on the poorest sand. Mr. Burness sows the *T*rifòlium incarnàtum on his wheat stubbles, covering the seed with the harrow, but on no account stirring the ground deeper than 3 in., and finds a good crop of clover, either for grazing or cutting in the following May. The plants were now from 1 ft. to 18 in. in height, and in full bloom. This clover was also sown by Mr. Hill, a Northumbrian farmer, in the neighbourhood of Mr. Donald, and it seems to be considered a valuable addition to our British clovers. It is strictly an annual, and will on no account live through a second winter. In Mr. Burness's parlour, we saw the picture of an ox of the Sussex breed, five years old, fed on the farm without the aid of oil-cake, which weighed 240 stones of 8 lbs., contained 30 stones of fat, and sold for 60*l*. The painting of this ox was by Mr. Steers of High Wycombe. In the farmery are some new sheds for fattening cattle on the plan described by Mr. Newall of Dumfries, in our *Encyclopædia of Cottage, Farm, and Villa Architecture*. In the breeding pigsties, Mr. Burness has introduced a contrivance for preventing the mother from crushing her sucking pigs against the wall. It is simply a shelf carried round the interior of the sty, about 9 in. wide, and raised about 9 in. from the ground. This shelf prevents the sow from pressing herself against the wall when lying down, and leaves space sufficient between her and it, for the pigs to pass. This contrivance, and also a general plan, &c., of these pigsties, will be found in the *First Additional Supplement* to our *Encyclopædia of Agriculture*, now in the press. The dry, poor, sandy soil of Bagshot Farm is particularly calculated for being benefited by bone manure; and Mr. Burgess consequently buys a great number of bones. The price he pays for them is 20*d.* a heaped bushel: when ground, they lose about a tenth of their bulk, and the price for a bushel of dust not heaped is 2*s.* The bones, after being ground, are mixed with equal parts of turf ashes or sandy soil, and the mixture is laid in heaps for a fortnight to ferment, before being spread upon the soil. The fermentation which takes place is most powerful, and, if permitted, it would continue for a great length of time; but a fortnight, which is found absolutely necessary, is also found quite sufficient to render the compost fit for agricultural purposes. This necessity of fermenting bone dust, before spreading it on the soil, should not be forgotten by gardeners, when using it in the composition of vine borders (see Mr. Forrest's practice, detailed in V. 502.), or as a general manure. Perhaps bones ground, and mixed with soil, might be found an excellent substitute for tan. Mr. Burness has invented a machine for drilling bone dust along with corn, or turnip or other seeds. It may be made to sow six or eight rows at a time, and the distance between the rows can be varied at pleasure. This drill may be had of Messrs. Cottam and Hallen. In feeding both cattle and sheep, oil-cake is frequently given here. Mr. Burness finds that it does not affect the flavour of beef or mutton in the slightest degree; but that it totally changes the character of the fat of pigs.

The Pleasure-Grounds at Bagshot Park never appeared to us in such great freshness and beauty as they now did. Mr. Toward has made many alterations and additions since we last saw the place in 1831; and the growth of what was formerly planted has assimilated the whole more to the surrounding woods, and taken off that appearance of newness, which is inseparable from every garden for a year or two after it has been made. The principal addition is an elevated straight terrace walk, finely exposed to the south, and sheltered from the north by a laurel hedge. On the lawn, at the bottom of this walk, Mr. Toward has formed some beds, on raised panels of turf, in the manner of those in the flower-garden at Windsor Castle, which look exceedingly well from the terrace. An entirely new flower-garden has been formed, of an oval shape, with a basin and fountain in the centre, and beds and borders so arranged that not one of them could be moved 6 in., without deranging the whole figure; a test of perfection in this branch of design, which affords a proof that it is thoroughly understood by Mr. Toward. The rosary was in a fine condition, without aphides or mildew, and promising abundant bloom. The roses being chiefly dwarfs, well cut in every year, and taken up, divided, and the soil refreshed every two or three years, the plants grow with such vigour that they are not nearly so liable to aphides as standard roses. The original flower-garden (see IV. 434., fig. 116. *d*), in which the beds were planted with a miscellaneous assortment, is now replanted with the same species, in the manner in which we think all large flower-gardens like this ought to be planted; viz., every bed contains either one natural order or tribe, or two or more natural orders or tribes which are closely allied. Mr. Toward finds that, in almost all his showy orders fit for use in flower-gardens, there are species calculated to come into flower during the whole season; but, as there are some showy tribes in which this is not the case, such, for example, as *Pæoniàceæ*, he introduces among them annuals or other temporary summer-flowering plants. Bulbs are introduced into others; but this order of plants is but little cultivated here, the family generally being in town when they come into flower. In the American garden, in the beds of which azaleas, rhododendrons, kalmias, &c., were uniformly mixed together, the families are now in groups, and the plants are kept apart in Mr. Garnier's manner. The beauty of this garden, now in its highest degree of perfection, we want words to describe. The last improvement which we shall mention is the construction of a very handsome moss-house, built from a very beautiful model, designed and made by Mr. Toward. This moss-house is executed with great neatness and beauty, and Mr. Toward has promised to send us such drawings and descriptions of it as will enable other gardeners, where labour is cheap, to make similar erections. On the whole, we were exceedingly gratified with our visit to these gardens; and, in taking leave of them, and of Mr. Toward, we must not forget to remind the young gardener of Mr. Toward's admirable plan for forming a herbarium, as described at length in IV. 436., and recommending every one who is drying specimens of plants, to take it as a model for their preservation.

Addlestone Nursery. — *May* 20. Science, order, and neatness characterise whatever comes under the direction of Mr. Cree. We found the whole of his grounds in good keeping, and observed a new description of double espalier rail, constructed for training peaches, nectarines, and other dwarf fruit trees. The direction of the lines of this rail is due south and north, in order that both sides may equally enjoy the direct influence of the sun; the height of the rails from the ground is about 4½ ft., and they are about the same distance apart. Each double rail consists of posts of young larch trees, between 2 in. and 3 in. in diameter, with the bark on, and charred at the lower end where they are let into the ground; and a top and bottom rail also of young larch trees with the bark on. The stoutest description of lath used by plasterers is then nailed vertically to the top and bottom rail, and on both sides of it; the rails on one side alternating with the spaces on the other. These laths are not painted, but, being of foreign fir, and well seasoned, there can be no doubt of their enduring a long time. Indeed, it would be much cheaper to renew them every seven years, than to paint them twice or thrice during that period; unless the paint used were to be gas liquor or tar. The larch posts and rails will last an unlimited length of time. *Rìbes* speciòsum has here been very successfully propagated, and there is a plant of Schizánthus retùsus which shows some flowers double, and wholly red.

Woburn Farm. — We entered this venerable place (now to let, in consequence of the death of Admiral Stirling), to look at some of the fine old specimens of exotic trees. This, however, is not a favourable season for such a purpose. Pines, firs, ilexes, hollies, and other evergreens, it is well known, look worse at this season than at any other, because they are losing their old leaves; and deciduous trees, remarkable for their autumnal foliage, such as the liquidambar, of which there is here a very fine specimen nearly 70 ft. high, have not yet attained a sufficiently marked hue to distinguish them from oaks and acers. Other species which depend principally on their blossoms for their beauty, as the tulip tree, are not yet in flower. The tree which we now found in greater beauty than it will be in any other season was a large cut-leaved alder in front of the house. It is a light airy tree, with deeply and finely cut foliage of an intense green. The walks on the high banks overlooking the river, Chertsey, and an immense tract of distant country, extending to Windsor Castle on the one hand, and to Harrow on the Hill on the other, are interesting in themselves, and recall many associations to those who, like us, know the history of the place. The general impression throughout is that of maturity and age. Every tree and shrub is grown up; and only the more vigorous-growing sorts of the latter have been able to withstand the effects of the shade of the tall trees. All the more delicate shrubs, and almost all the flowers, have died away; and no new ones have been planted for the last thirty years. The tutsan, the periwinkle, and a few of such hardy plants as grow under the shade of trees, remain, to carry back the idea to what has been in the way of flowers; while decayed urns, seats, and other architectural and sculptural fragments, remind us of the numerous garden ornaments which it was the fashion to introduce in the times when these gardens were laid out. This want of young trees, and of young plants of every kind, gives Woburn Farm a decided character of artificialness, more even than of age; for, in a natural wood or neglected plantation of the same standing, for the hundreds of old trees that would be there decaying, there would be tens of thousands of young trees springing up from seed. This combination of trees of all ages, in groups of every imaginable form, interspersed with glades, sometimes with a rough and sometimes with a smooth surface, occasionally with pools, and at other times showing rocks or broken ground, constitutes the great charm of forest scenery; and the finest recollections which we bear with us of Sweden, of the interior of Poland, and of the south of Germany, are of scenery of this description. Woburn Farm, as it now is, is most interesting as a place to visit; but, as a place to live in, to us it would be intolerable: it is without movement; though this may be matter of taste.

Oatlands.—The road from Woburn Farm to this place, through Weybridge, is between meadows bordered by broad ditches, filled with clear water and numerous aquatic plants. The scene, being almost without middle or third distance, is of a very peculiar, but yet peaceful and beautiful kind. Weybridge is a scattered village, made up of comfortable-looking cottages, variously disposed, and each appearing to have more garden ground than is usual in similar villages. Except in the growth of the trees, little change has taken place in it since we stopped all night at the inn here, in 1804. We walked down to the kitchen-garden, and learned from Mr. Hayward, the gardener, that the grotto and the terrace walk, the latter of which we were anxious to see, were on no account shown to strangers. The kitchen-garden appeared in good order, and there were abundant crops of ripe grapes in two of the pineries.

Walton, Lady Tankerville.—We visited this place, in the same month, exactly thirty years ago, when our friend Mr. Richardson, the gardener, had only been a few years established as manager. Lady Tankerville's collection of plants was then reckoned one of the best, if not the very best, in the neighbourhood of London: it has since been surpassed by others with regard to the number of species, but by none in the manner in which they are grown, or the size to which the palms and other stove plants have attained. The peculiar characteristic of Mr. Richardson's management is, that he never loses a species; and, consequently, we find here a number of green-house plants of the last century, some of which, as far as we know, are not to be found anywhere else, not even at Kew, or at Messrs. Loddiges. The most remarkable exotic specimens are the palms, a date having leaves upwards of 30 ft. long, which, we believe, is larger than their size in their native country, and an *E*'late sylvéstris, with a stem 20 ft. high, and having larger foliage than we think we have seen elsewhere. There is a Córypha umbraculífera with leaves 12 ft. in length, and a stock 1½ ft. in diameter. A banana has abundance of fruit ripe at the upper end of the spike, and the terminating blossom just expanding. There is a remarkably large Zàmia púngens, with the leaves extending about a yard on every side. Among other curious points in the history of this plant, we were informed that Bonapárte offered a hundred guineas for it for the collection at Malmaison. It is a female, and has borne fruit and ripened seeds, which were, of course, imperfect. The seeds were edible, but not good. A fine drawing of this plant, with sections and details of its flowers and fruit, was made, some years ago, by Mr. Chandler, jun., Mr. Richardson's son-in-law, and engraved on an imperial folio sheet at the expense of Lady Tankerville. Mr. Richardson informed us that one of the ladies of the Tankerville family was the first to cultivate seedling varieties of heartsease, which she did in a small bed in the shape of a heart; and he has since continued to raise new sorts, and to maintain a very excellent collection, notwithstanding the singularly dry sandy soil of the whole place. In this soil the common thyme is found to make beautiful edgings to walks; and the asparagus to attain an enormous size and most superior flavour. Passing on to the American garden, we found the azaleas, rhododendrons, andromedas, &c., of enormous sizes, covered with bloom, and harmonising well with the high trees by which they are surrounded. There are here some large magnolias, a Judas tree between 20 ft. and 30 ft. high, a *Pìnus Cémbra*, 35 ft. high, and the largest Halèsia díptera (20 ft. high) in the neighbourhood of London. In other parts of the grounds are *J*uníperus virginiàna with a trunk 2 ft. in diameter and 40 ft. high; *I*'lex opàca, 25 ft. high; *Asímina* tríloba, 15 ft. high; Magnòl*ia* tripétala, 30 ft.; *T*ămarix germánica, 30 ft.; Camélli*a* vĭridis (the green tea), forty years old, and 8 ft. high; *A'*lnus laciniàta, 2 ft. in diameter; *C*upréssus sempervìrens, 25 ft. high; *B*úxus baleárica, 10 ft. high; *T*ĭlia álba, *Q*uércus *C*érris, and *Q.* rùbra latifòlia, each about 60 ft.; and the *U'*lmus glàbra of Miller, or Scotch elm, 80 ft. The portion of smooth lawn, varied by fine groups of old trees, which lies on the river side, has an undulating surface; and, whether regarded for its interior beauties, or for its views up, down, and across the river, is most beautiful. A part of the bank along the water is particularly prolific in spring flowers; and this Lady Tankerville never has mown with the rest of the lawn till June, lest these flowers should be destroyed. This amiable trait reminds us of a lady in Lanarkshire, near the Falls of Clyde, who has the cowslips in her lawn taken up with balls whenever it is mown while they are in flower, and carefully reset in their places after the scythe and the broom. Besides the many fine specimens of trees and shrubs on the lawn at Walton, there is a small oblong grove, chiefly of limes, the branches of which, on every side reaching to the ground and excluding the light, give to the interior the appearance of a cathedral, with a rich roof of tracery. There are two distinct varieties of the scarlet oak, and near them a very fine tree of the Turkey oak, which, on this deep sandy soil, is found to grow much faster, and to make a taller straighter tree than either the common oak, or any other species of the genus. The Turkey oak, Mr. Richardson thinks, ought to be generally planted instead of the common oak. Its timber, we believe, is somewhat coarser in the grain, and perhaps not quite so durable; but it is a tree of much more rapid growth, and generally contains most of its timber in a straight trunk; while the common oak is proverbial for the size of, and consequently quantity of timber in, its lateral branches.

Two circumstances struck us, in the course of this tour, which it may not be out of place to mention. The first was the high price of human food of every kind in the country, compared to what it is in London, or its immediate vicinity. House and garden rent is undoubtedly considerably lower; but by no means to such an extent as to compensate for the difference in the price of food. We see in this the main cause of the great increase of London. Whoever has a moderate income, from rent, or savings of any kind, can have more enjoyment there for the same money, than he can have any where else in the island. Hence London will go on increasing till it is many times its present size; and, if the system of roads or streets, supply of water, sewerage, lighting, and (what soon, we have no doubt, will take place) heating by public companies, public gardens and places of recreation, general municipal government and police, are properly attended to, we can see no possible disadvantage that would result, if the metropolis were to extend to Lowestoff on the one hand, and to Liverpool on the other. Supplies would then be received from Ireland and North America, on the west, and from the shores of the Baltic and the Mediterranean, on the east, and distributed over the interior by means of railroads and locomotive engines.

The next thing which struck us was the great variety and beauty of which the public roads are susceptible; in some places by the improvements of the proprietors in building and planting, and in other places by the unenclosed margins of turf, of irregular width, sprinkled with trees. There are some fine examples of this kind of road about Woking, and thence to Guildford. We could not help regretting that, in some places, these marginal strips of waste, as they are called, have been enclosed by fences brought as near the road as the law will permit; thus reducing the road to a broad lane, which is neither so soon dried after rain as when it is left open, nor so light for the traveller in a dark night. The strips thus enclosed are frequently planted, and, in that case, the effect on the road is much worse. We have seen enclosures of this kind made and planted on the outside of park walls; a mode of proceeding which appears particularly ungracious towards the public, on the part of those who have already so much. Far more becoming conduct in a wealthy proprietor, who took an interest in the beauty of his country, and sympathised with the enjoyments of the generality of mankind, would be, to grant from those parts of his estates which lay along the public road, narrow strips of land, which might be partially planted, or otherwise rendered available to public ornament and enjoyment. As the minds of proprietors become enlarged, and as public spirit and benevolence take the place of selfishness and exclusiveness, we are persuaded that acts of this kind will become frequent both in town and country. Why should not a wealthy man, who possessed a cluster of houses in a crowded part of London leave them to be taken down when their leases expired, and the surface kept as an open grass plot for ever? Why should not patriotic noblemen, all over the country, set back their park walls fifty or a hundred feet or yards, and leave the intervening space as a shady public walk? Why should not wealthy proprietors, who have no immediate heirs, leave now and then a park or villa near a large town, as a legacy to that town, to be kept for ever as a public garden? We are persuaded that many persons only require ideas of this kind to be suggested to them. Whether the current of a man's feelings takes a generous or an ungenerous direction is often a matter of accident; but not so the result, as to his own happiness.

Wimbledon House, Mrs. Marryatt. — May 28. This residence, consisting of an excellent mansion, and grounds to the extent of nearly 100 acres, first became celebrated about half a century ago, when it was the property of Bond Hopkins, Esq., a wealthy banker. It was afterwards purchased and enlarged by the late Joseph Marryat, Esq.; and it was greatly improved by that gentleman. It is now in the possession of his widow, who continues to spare no expense in enriching and adorning the place, and more particularly in procuring the rarest and most beautiful plants.

On passing through the house to the back front, the first thing that strikes the stranger is a magnificent panoramic view, consisting of the park scenery, including many large beech trees, some old oaks, a few cedars of Lebanon, many very fine evergreen oaks, some pines and firs, and a beautiful piece of water in the foreground. The stranger, after this striking view, turns to the left to the flower-garden, or to the right along a shrubbery walk of upwards of a mile in length, which makes a tour of the place, and shows off both the exterior and the interior scenery to the greatest advantage. We took the direction of this walk on June 7. 1828, and, passing through a grove of evergreen oaks of large size (some of them with trunks 2½ ft. in diameter), we left on the right a rural fruit-garden, planted with the summer fruits, such as the gooseberry, strawberry, raspberry, cherry, &c., to be gathered by young people and consumed on the spot, as in the cherry-garden at Hylands. (III. 385.) Adjoining the evergreen oaks were a large cork tree, a very fine *Ligústrum lùcidum*, common and Portugal laurels, a fine red cedar, a *Rhododéndron pónticum* 97 ft. in circumference, large silver firs, and some singular masses of ivy.* Farther along the walk, we have a distant view of Westminster Abbey and St. Paul's, with Lord Spencer's park, including a beautiful sheet of water, in the foreground, and the Thames, from a seat under an immense beech tree, one branch of which, partly pendulous, measures 75 ft. long. Quitting the long route which leads through a rustic gate on a slight eminence, we arrived at a very spacious ivy-covered summer-house, furnished with a large table and matted seats, and capable of accommodating a party of twenty. This overlooks a beautiful serpentine piece of water, richly wooded, and overhung by weeping willows, where wild fowls dwell in peaceful retirement, and which is termed "the Wilderness." Descending from this we passed the water head, which has a rocky cascade studded with alpine plants, and ascended, through the shrubbery (which bounds Lord Spencer's park), to the grotto which is situated at the termination of a creek of the main sheet of water (of seven acres). This grotto was formed by Bushell, who constructed the grottoes at Oatlands, Pain's Hill, and other places, and who was the most celebrated grotto and cascade artist that ever appeared in England. The grotto at Pain's Hill, constructed for Bond Hopkins when he was proprietor of that place, is considered his *chef-d'œuvre*. Bushell's son is said still to follow the same business.

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* A small but interesting garden, stored with British plants, and conducted solely by Miss Marryat, now (June 4. 1834) exists to the right of these, and at the end of the rural fruit-garden. In a little dell, between the silver firs, where, from the shade, the grass had scarcely lived, and where water, after heavy rains, collects, the gardener has so enlarged a small clump of rhododendrons which he found existing there, as to cause it to fill, in good part, this dell; and it is delightful to see the vigour, and the health, and the beauty, in their flowers, though these are now declining, which these plants display. Mr. Redding has raised many seedling rhododendrons, and, like others, finds considerable variety in the flowers of the seedlings. — *J. D.*

Passing through a wood of forest trees, we next came to a light iron bridge, which communicates with the embankment of the large piece of water. Near the iron bridge are an immense pollard oak, some centuries old, covered with ivy, and a very large Magnòl*ia* acuminàta, the first plant of that species brought to England by Fraser. There are two islands on this lake: one containing baths, &c.; and the other the remains of an enriched Gothic building, which was used as a Catholic chapel by the Prince de Condé, who resided here before the place was purchased by Mr. Marryat. After crossing the iron bridge, we proceeded through the farmyard, and a complete poultry yard, &c., to the kitchen-garden, in which, in 1828, we observed, for the first time in England, a compartment devoted to the culture of maize as a culinary vegetable. The plants were placed in groups of four under a hand-glass; the groups, or hills as they are technically called, being four or five feet apart every way. This is done in May, the plants being raised in a hotbed; and in June, when all danger from frost is over, the handglasses are removed. The plants are earthed up two or three times in the course of the summer. They produce magnificent masses of shoots and foliage, and abundance of ears, first from the main stems, and afterwards in succession from the larger and smaller side shoots, from the beginning of July to the end of September. These are gathered when the grains are in a milky state, and fried or boiled, and eaten with melted butter. In the south of France, and, we believe, in America, the ears are gathered when the seeds are in a more advanced state, and, being boiled with milk, form a dish like what is called frumenty in England, or brose or knotty porridge in Scotland.

We now enter the hot-houses, two of which are devoted to grapes, one large central house to green-house plants, and a third large house to plants from the tropics. The forcing of peaches, cherries, and strawberries, and all the other descriptions of forcing, together with the rearing of reserve plants for turning out into the flower-beds, supplying deaths, &c., and the nourishment of sick plants, are carried on in a division between the kitchen-garden and the farmyard, termed the melon ground, expressly devoted to that purpose.

In the plant-stove we found, in 1828, a plant of *P*sídium pyríferum in a pot, which had borne from sixty to a hundred fruit, as large as crabs, and as good as any Mrs. Marryat ever tasted in the West Indies, or as Mrs. Bowdich, then present, had ever eaten in Africa. In the botanic stove, *Caraguàta* lingulàta, a new species, raised from seeds presented to Mrs. Marryat by Mrs. Bowdich, was then coming into flower for the first time in England. We noted many fine specimens both in the hot-house and green-house; but we pass on through the flower-garden to the house. In the flower-garden we noticed a fine basin with a fountain, surrounded by rockwork and choice plants; and two covered walks, the one on the east side and the other on the west side of the garden, both in the direction of north and south, and one covered with laurels and other evergreens for winter, and the other with roses and honeysuckles for summer. One side of this flower-garden is bounded by a wall, on which are many half-hardy exotics, and among them a fine specimen of the silk tree, a pomegranate which bears fruit, and fine plants of Wistàr*ia*, Chimonánthus, Edwárds*ia*, &c. The area of the garden is distinguished by the number and richness of its masses of flowers, and the characteristic merit of the gardener in his being able to keep up a succession of flowers in every bed throughout the whole season. We were particularly struck with the masses of roses, the flowers of which were following those of different white narcissi, the latter having been in bloom before the roses were in leaf. We found masses of florists' bulbs ready to be removed, or to have pots of rapidly growing green-house plants inserted among them, so as to cover the bed in a short time. Crocuses, snowdrops, hyacinths, &c., were succeeded by mignonette; and crown imperials, fritillarias, &c., by pelargoniums, fuchsias, &c. Some of the finest masses we saw in 1828 were those of Czáck*ia* Liliástrum; Linària alpìna, which was growing most luxuriantly on a cone of white flints, and covering them with its sea-green leaves and purple blossoms; Eròdium *ma*lachöìdes, rare and beautiful; *P*apàver nudicaùle, numerous new varieties raised from seed; Erythrìna *C*rísta gàlli; masses of *C*ístus, and of Heliánthemum on rockwork, numerous varieties; *C*ólchicum autumnàle, alternating with *C*ròcus vérnus; *G*ladìolus cardinàlis; pelargoniums in great variety; heliotropes; Alonsò*a*, &c. Sprinkled over the lawn are several choice exotic trees and shrubs; and there are, besides these and the flowers, some beds devoted to peat earth plants; and, in the lower part of the garden, beds of Azàlea, *R*hododéndron, Kálm*ia*, &c. Besides numerous standard roses, there is a bower or tent formed by a circular arcade of festoons, and by other festoons from the circumference to the centre. The whole being of stout wire, nothing is seen but the roses. These consist of innumerable varieties of the Indian roses budded on the *R*ósa arvénsis, so that the whole is covered with bloom from the beginning of May till the commencement of frost. From this garden we proceed along a straight walk to the old flower-garden, the orangery, and the conservatory; the latter adjoining the house. Thus far as to our visit of June 7. 1828. On our present visit (May 28. 1834), we took the left-hand road from the lawn front of the house; and, passing a large catalpa, *C*ratæ̀gus cordàta, a scarlet horsechestnut, a salisburia, and some groups of rhododendrons, azaleas, and some other American shrubs on the left, and some fine cedars and spruce firs, with their branches sweeping the ground, on the right, we arrived at the orangery above mentioned. The walk through the old flower-garden has received the additional decoration of a handsome row of vases, on plinths, on each side; and the straight walk mentioned above, which leads from the old flower-garden to the new one, is buttoned, as Horace Walpole would have expressed it, with green Chinese flower-pots, containing ornamental plants in flower. On entering the flower-garden, we found it increased in extent, and, if possible, in beauty. The first thing which struck us was the same bed of Czáck*ia* Liliástrum, now in full bloom, as it was in 1828, on June 7.; a proof that this season is at least ten days earlier than the same season of that year. We found many new beds added, particularly some of peat earth, containing select American plants, and the newest azaleas. In two borders, one along the laurel arcade, and the other in front of a range of hot-houses, are a number of new plants, introduced from Italy last year by Mrs. Palliser, Mrs. Marryat's daughter. Several of these are now coming into flower for the first time. We have been favoured by Mrs. Palliser with a list of all the kinds introduced, whether by plants or seeds: and it includes not only the kinds now living, but those which have not vegetated, or have vegetated and have since died. One species of *V*ícia deserves particular mention, as likely to become a forage plant. As a proof of its hardiness and earliness, it has been in bloom here all the winter; it is now almost out of flower, and the lower seed pods are beginning to ripen. Two or three seeds of this species (*V.* trícolor), with which we were favoured, we have sent to Mr. Gorrie, who will prove its worth with reference to the climate of Perthshire; and we shall have other opportunities of sending seeds to other agricultural experimenters.

The beds of roses struck us as particularly luxuriant: some of them consisted entirely of Scotch roses, and others were only bordered with that species. The roses on the tent and the covered walk, and also the avenues of standard roses, were remarkably free from insects; a result which is obtained by hand-picking. Along the bottom of the garden, there is a broad border of rockwork, devoted to the culture of ferns and other rock or wild plants, or plants that love moisture or the shade. A bed of *L*upìnus polyphýllus was very splendid; that of *P*apàver nudicaúle, varied and beautiful; *P*apàver bracteàtum made a fine appearance in different beds and borders; and along the margins of several masses the heartseases were most brilliant. Masses of ten-week and of Brompton stock, of ranunculus, of clarkia, of eschscholtzia, of yuccas, of petunias, of schizanthus, and of a great number of other articles, deserve to be here mentioned; but we refer to Mr. Denson's account, dated June 4., and immediately following these notes.

In returning to the house, we saw, in the adjoining conservatory, the tacsonia, in festoons over the paths, covered with bloom and ripe fruit. The latter are globular, and about the size and colour of large golden pippins. We did not enter the kitchen-garden, nor walk round the shrubbery. The walks in the flower-garden were well gravelled, and just as we could wish them; the beds were also full of earth; and the turf edges of both were not cut with a spade, but clipped. In short, these two material points were entirely to our taste.

The following list includes the names of rare species of plants which Mrs. Palliser has introduced, by seeds, &c., from different botanic gardens in Italy, into the garden of Mrs. Marryat. Those starred, Mrs. Palliser deems to be new to Britain: —

Airópsis *pulchélla *Tenore* [this is registered in IX. 240.]; *A*'llium *multibulbíferum, *ciliàtum *Cyr.* [this is the subhirsùtum *G. Don*], *Cupàni Rafinesque, controvérsum, ròseum, violàceum, tenuifòlium *Ten.*, pusíllum *Cyr.*, &c.; *A*lthæ'a *sylvéstris *Briganti*, *A*lýssum orientàle *Lin.*, Amphérephis *aristàta *Kunth*, *A*nchùsa *arvàlis, *A*ngélica *nemoròsa *Ten.*; *A*ntirrhìnum sículum *Gussone*, *jamaicénse *Fisch.*, capitàtum *Presl*; *A*'rabis collìna var. ròsea *Ten.* [it is probable that this is the *A*'rabis ròsea of *Bot. Mag.* t. 3246.]; *A*'triplex *polysperma *Ten.*; *Basélla* ramòsa *Jacq.* [this has flowered, and borne red berries; the plant is about 4 in. high]; Borkhaúsia leontodonöìdes, from the botanic garden at Turin; Calandrínia *procúmbens *Moris*; Caléndula *arragónica, from the botanic garden at Turin; Campánula Alpínii, divérgens, *lunariæfòlia, perfoliàta, obliquifòlia, stylòsa, *pulchérrima *Schrank* [⊙, 1 ft. high, flowers in June, corolla blue], *frágilis [dead], *Cavolìni, and *gargánica [an interesting prostrate species, of numerous flowers; corolla blue], (the last three are among the most beautiful of the dwarf Neapolitan Campanulàceæ; and, of each, it should be remarked that there are a smooth and a hairy leafed variety. M. Tenore has also another handsome new Campánula, named *Rosàni, which he has not hitherto been able to increase); *C*ápparis sícula *Duhamel*, Cinerària gibbòsa *Guss.*; *C*ólchicum *Bivònæ Guss., neapolitànum; Collòmia *pinnatífida, *C*onvólvulus *Imperàti, *C*órchorus *trìdens; *C*ròcus *Thomàsii Ten. [this is registered in Sweet's *Hort. Brit.* p. 596.], *longiflòrus *Raf.*, *Imperàti Ten. [in Sweet's *Hort. Brit.* p. 596.], *albiflòrus; *D*elphínium *anómalum *Hort. Crac.*, *uncàtum *Hort. Prag.*, &c.; Diánthus *attenuàtus [has, Mr. Redding, jun., told us, somewhat of the habit of plumàrius], Bisignàni, *córsicus [♃ jn. W.], *mársicus, &c.; Diplotáxis ápula *Ten.*, *pátula; Digitàlis [*] austràlis *Ten.* [♃ △, 2 ft.] orientàlis, &c.; *D*ràba *Nummulària; *E*'chium *róssicum [⊙, 3½ ft. jn.jl. Pa.Li.], Sibthórpii; *E*rìca ramulòsa, *sícula *Guss.*; *E*uphórbia *prunifòlia, *pyrifòlia; *F*érula *Barrelièri Ten., *G*àlium *adhæ'rens, *G*erànium nemoròsum *Ten.* [as well as we recollect, this is somewhat in the mode of *G.* pyrenàicum; but has larger and more showy corollas], Globulària salícina; Gypsóphila *collìna, *sabulòsa; Heliánthemum Barrelièri, *læ've, Líppii, *obscùrum, &c.; *H*eliotròpium *Boccòni Guss., *H*ellèborus Boccòni Guss., *H*ibíscus *strigòsus *Ten.*, Lavátera sylvéstris *Cyr.* [can the *A*lthæ'a sylvéstris, named above, be identical with this ?]; *L*ithospérmum *rosmarinifòlium *Ten.*, from the rocks of Capri [a suffrutescent bushy plant, 1½ ft. high]; Lìnum *acuminàtum, *aquilìnum, *decúmbens, *grandiflòrum [1½ ft. high; corolla blue], *marginàtum, *monadélphum, nervòsum, *nudicaúle, &c.; Lupìnus *Casentìni Guss. [like mutábilis in height and growth; corolla blue], Mùsa *speciòsa _Ten._ [dead]; Málva *micrócalyx _Dec._, *pulchélla _Hort. Prag._; Morísia *hypogæ`a _Moris_ [this is a little alpine plant, with a yellow flower], a new plant from Sardinia; Mandrágora *microcárpa _Bertoloni_, Népeta *racemòsa, O'robus *Jordàni Ten.; O'xalis [double-corollaed] *caprìna [is registered in Sweet's _Hort. Brit._ p. 103.], *vígila, *micrántha, Pióttæ, &c. (in all, upwards of thirty species, the botanic gardens in Italy being very rich in this genus); Pavònia *venèta _Willd._, Pìcris *scabérrima _Guss._, Pimpinélla *anisöìdes; Plantàgo brùtia [the flower scapes attain the height of 1½ ft.; the species looks, at a glance, like a gigantic _P._ lanceolàta], Cỳnops, &c.; Polýgonum *serrulàtum _Guss._, Potentílla Thomàsii Ten., Rícinus *microcárpus _Bertero_, Ranúnculus *gargánicus _Ten._ [is registered in IX. 241.; its flower is yellow], Salicórnia *macrostàchya _Moricand_, Sálvia *leucántha [we learned that the plant bears blue flowers; which case shows the name inept, if not applied to this plant in a mistake: this blue-flowered kind is ♄ △, and about 3 ft. high], Saponària calábrica _Guss._; Scabiòsa *ambígua _Ten._ [2 ft. au. Pk.], ceratophýlla, Colúmnæ, rutæfòlia, limoniifòlia, &c.; Silène *hispánica _Jacq._, fontàna _Ten._, &c.; Stapèlia *europæ`a (found by Gussone in the Island of Lampedusa, the most southern point of Europe; and particularly interesting, as being the only European species), _Tólpis_ *grandiflòra _Ten._; Trifòlium *dalmáticum, vesiculòsum, &c.; Vícia *dasycárpa _Ten._, *polyspérma _Ten._ [♄ △ or. 3 ft. B.], *ferrugínea _Bess._, *trícolor _Seb. & Macris_ [Loudon's _Hort. Brit._ No. 19258.]; Vìola arenària, *Dehuhárdtii, *grácilis _Guss._, lancifòlia; _Verónica_ *multicaúlis, *flórida.

Trees. A'cer Lobèlii, neapolitànum; Anagỳris *neapolitàna _Ten._; Cýtisus *eólicus, found by Gussone in Stromboli; Hàkea *lanígera _Ten._; Juníperus phœnícea (also *macrocárpa, from Lake Fusaro, but the seeds have not come up), Méspilus laciniàta; Pìnus *brùtia _Ten._, Pínea, marítima, and halepénsis [some, perhaps all, of these were up, in an infant state]; Rhús *_Thézera_ Guss., Smìlax maurocénsis; Stýrax officinàlis, from the rocks of Tivoli, where it grows abundantly, and whither it is said to have been brought from the East by the Emperor Adrian; Spártium *inféstum _Presl_; Thùya cupressöìdes, articulàta, pyramidàlis, &c.

Fruits. Apples: Jannurco, Limoncello, Bergamotto gelato. The singular iced appearance of the fruit of the last is said, by Tenore, to be only the consequence of the intensity of the sun's rays, as the apples grown in the more shady branches of the same tree do not possess it. Pears: Spina del Carpio, Angelico, Carmosino, Mastrantonio. Medlar: Mespolo senz' osso (Méspilus germánica var. apyrèna), a small species of medlar without stones. Plums: Pappacoda, Scaldatello, Scaldatone. The last two are winter plums, resembling the Impératrice, only white; they hang upon the trees till they are shriveled, and keep till February. Grapes: Zibibbo, a small Sicilian grape; Lugliese, white and black; Uva del vasto, a large white winter grape without stones; Uva di Spagna, large, black, much cultivated at Genoa; Carniola, a long white grape; &c. Fig: Trajano. Black-fruited apricot, and some peaches; also the blue cauliflower, and the black and Roman broccoli. A winter melon, which keeps till the spring: the Neapolitans hang them on the walls outside their houses. A collection of curious species (or varieties) of orange trees from the gardens of Count Camaldali.

We asked of Mrs. Marryat the names of those species of plants which have been figured, or otherwise published, from her collection. The following are those which came more readily to mind: — Argyrèia spléndens _Bot. Mag._ 2628., Hibbértia pedunculàta _Brown_ (corifòlia _Bot. Mag._ 2672.), Anagállis Marryàtæ Swt., Lupìnus pulchéllus _Swt. Fl. Gar._ 2. s. 67., Zephyránthes carinàta _Swt. Fl. Gar._ 2. s. 4.; _Tacsònia_ pinnatistípula _Swt. Fl. Gar._ 2. s. 156., _Bot. Reg._ 1536. a Banksian medal has been awarded by the Horticultural Society for specimens of this plant; Stigmaphýllum aristàtum _Bot. Reg._ 1659. — _Cond._

Wimbledon House. — *June* 4. In the conservatory attached to the mansion, the most beautiful of the plants in blossom were the *Tacsònia* pinnatistípula and the Schizánthus retùsus. The *Tacsònia* is eminently endowed with the faculty of climbing; and its branches, now bearing flowers and fruit, have been disposed over the light pillars, arches, and bars which support the roof of the conservatory; and partly enwreath them, and partly depend from them, in the manner of festoons and garlands. The flowers are lovely objects. They are large and pendulous, and thus well seen from below: the petals are of a delicate rose colour, and contrasted by a central ray of violet-coloured linear nectaries; and these surround the stamina and pointal, which project beyond them. The fruits, as large as a small orange, and of a pale yellow colour, depend on long stalks, and are another charm in the attractions of the plant. The flowers of the *Tacsònia* are continuously produced from April to November. Of the Schizánthus retùsus there were some eight or nine pots of plants, all nearly a yard in height, and crowned with masses of the striking, richly-painted, gorgeous blossoms of this most attractive species. Of *A*càcia pubéscens (too uncommon, considering its elegance and beauty), a fine plant, not now in flower, was attached to one of the interior pillars; and of the *A*càcia decúrrens, a fine plant, trained to the back wall, was interesting in its beautiful foliage. A plant of the Fúchs*ia* coccínea invested one of the pillars, from top to bottom, with a pyramid of thickset branches, now abounding in flower-buds. In a pot was a rather tall but slender plant of the Cunò*nia* capénsis, just going out of flower. The finest specimen of this species in Britain is probably that at Sion; which we had the pleasure to see finely in flower, under the care of Mr. Forrest, in September, 1830. There is also a fine specimen of that beautiful creeper *Técoma* austràlis, the old Bignò*nia* Pandò*ræ*.

On quitting the conservatory, a lawn adjoining receives us, upon which are growing a fine thriving cedar of Lebanon; a Pàv*ia* rùbra, now in flower; a Pàv*ia* macrostàchya; a Stuárt*ia* virgínica, now budded for bloom; a fine tree of the Salisbùr*ia* *a*diantifòlia; a large old Kálm*ia* latifòlia, and a young plant of the Cállitris rhomböídea. A plant of the Bengal flórida rose, here tied to an upright support, forms a slender pyramid, 10 ft. high, and has commenced its flowering. The flowers are unsymmetrical; but, as they are large, double, white, centred with blush, and numerously produced, and the kind of a free habit of growth, it must ever be desirable in an ornamental garden. The lawn of which we have spoken intervenes the conservatory and a long straight walk of gravel between grass and an avenue of young trees set back, and upon the grass, beside the gravel, are set, at intervals, large vases, in opposite pairs, filled with soil, and planted with various species of plants for display in summer. Of the kinds of plants adopted these are some: Claytò*nia* sibírica, more vases than one of, and this plant is here very beautiful; *Lob*è*lia* bícolor, and other species; Mesembryánthemum floribúndum, spectábile, cordifòlium; Kalosánthes odoratíssima, *H*elichrýsum *e*ricöídes, and another species; *A*nagállis fruticòsa, Gazània uniflòra, and an Alonsò*a*. The experienced in gardening will, from these, conceive pretty accurately of the remainder. At the extremity of this walk is the flower-garden, into which it leads one at the south-eastward corner.

The flower-garden contains three acres, including the enclosing boundaries. These are, a tall wall to the northward and westward, and a belt of shrubs and trees to the southward and the eastward. It is nearly square; and a range of houses (consisting of a stove for plants, a show green-house, a stove for forcing, and a vinery) occupies part of the northward side; the aspect of the houses being, of course, southward. The whole plot of the flower-garden declines slightly towards the south. Its plan may be, in a passing manner, described as follows: — A large lawn is interspersed and adorned with very numerous beds stocked with choice and showy-flowered kinds of plants; and with shrubs of beauty and rarity, and various in stature, planted singly on it, either quite alone or entwined with some climbing plant, or surrounded at the foot by a small bed occupied with some pretty-flowered species of plant. This lawn is traversed by two principal walks: one from the front of the houses to the bottom of the lawn; the other across the lawn, from west to east; and, also, by some subordinate walks in other directions. It is blended with the boundary belt on the southward by an intervening bank, planted, from the eastward end to about the middle, with rhododendrons (that have a nearly 3 ft. depth of heath mould provided for them, and have, this year, been splendid in flower), and rendered, in its remaining length, a ridge of rude rockwork occupied by British plants, some of them in flower. Along the upper part of this ridge, a few stumps, cut long, of trees with their roots attached, are set, bottom upwards; and about these, severally, is planted ivy, honeysuckle, and hop, whose branches will, it is expected, dispose themselves over the protruding roots in a tressy pleasing manner. The boundary belt on the eastward side is thin enough to allow peeps through it into the park beyond; and the garden foreground to this boundary is a broad border stored with species of herbaceous plants. Amongst these, *A*nchùsa itálica was now in splendid beauty; *E*'chium róssicum, an interesting species, was in flower, with a stem 3 ft. high; Smilacìna (Convallària) racemòsa, a cluster of stems of, were bearing several panicles of flowers; Eròdium Gussòn*i* was flowering; and *A*strágalus monspessulànus seeding freely. The westward termination to the lawn is a walk, some few feet from the wall, bestrode from end to end with a light rustic archwork, which supports a collection of climbing kinds of rose; and these, with the archwork, and with tall shrubs which are planted between the archwork and the wall, soften the line of termination in this direction. On the southward side of the northern boundary, a considerable space of wall is left clear of the westward end of the range of houses. This space of wall gives scope to the culture of some choice shrubs trained to its face. Of the kinds against it, we noticed Sólly*a* heterophýlla, *A*càcia *Julibrissin*, *C*eanòthus azùreus, Magnòl*ia* grandiflòra, a species of Passiflòra, the yellow pomegranate in bud for flowers, the scarlet (double) flowered pomegranate with some flowers open. In front, on this space of wall, there is a border of some breadth; and, among the choice species of plants growing in it, we have noted these: — Pentstèmon speciòsus, flowering; Alstrœmèr*ia* Símsi*i* and Flos Martìni, the flowers of the latter of finer colour than the flowers of a plant of it in the stove; Brodiæ'*a* congésta; Dísporum fúlvum, 2 ft. high, and shows flower-buds. This, we learned, flowers annually here, and attains the height of 3 ft.; and Lubín*ia* atropurpùrea, about to flower abundantly. A strip of rockwork, about three yards broad, is placed immediately in front of the two stoves; but is interrupted in the middle, to leave the entrance to the central green-house clear. This rockwork consists of a slightly elevated bank of soil, into which stones are partially immersed; and, in this genial warm site, many interesting plants are thriving to admiration. We name a few of them: — Céls*ia* crética, Coronílla ibérica, Tetragonólobus siliquòsus, *D*elphínium píctum; a *G*erànium, from abroad, by the name of argénteum, but very unlike the argénteum of some British collections; Linària Cymbalària, white-corollaed; and *P*aronýchia hispánica (*I*llécebrum *P*aronýchia *L.*), all in flower. These are the outlines of the garden; and a walk of comfortable width is introduced between them and the lawn: except that the arch-covered walk on the westward side is the bounding one; and side arches at intervals, all along, allow egress from this walk to the lawn.

To speak, now, of the plants upon the lawn itself. Of the shrubs, we shall name *A*'bies Douglàs*ii*, more than 6 ft. high; *Rìbes* speciòsum; Sólly*a* heterophýlla, recently transplanted from the green-house, and its branches trained about a surrounding guard of wirework; *C*ratæ'gus *t*anacetifòlia, in flower, and, twisted about its stem, a plant of Billardièr*a* scándens; showing some first flowers open, and buds in abundance for successive ones: this plant has stood here three winters unhurt. Magnòl*ia* tripétala, just going out of flower, but retaining petals enough (the natural number of these is from nine to twelve) to show that the name tripétala is not an apt one. The noble large leaves of this species, borne at the tips of the branches, resemble, in the woods of America (Decandolle has stated), an expanded umbrella; and the Americans call the species the umbrella tree: whence Lamarck has proposed to name the species Magnòl*ia* umbrélla; and the reforming Salisbury, dissatisfied with the name tripétala, would name it M. frondòsa. Magnòl*ia* conspícua, a plant of which has this year borne 300 flowers. A plant of savine, 15 ft. in circumference. A *Yúcca* gloriòsa had already a stem of coming flowers protruded beyond the leaves. Among the standard roses the Bengal élegans was a perfect picture for buds; its head was trained into the figure of an umbrella, and a copious crop of upright buds thickly studded its whole surface. Old standards, of a kind presumed to be the white céleste, bore beautiful clear white flowers. The boursault, trained into an arch astride a cross-walk on the lawn, was brilliant in an abundance of its rich-hued showy blossoms.

The various shrubs distributed about the lawn greatly promote the richness and interest of the garden. Their upward outline gives a second terrace, as it were, of verdure and of flowers, the plants beneath constituting the first; and these, here and there (as the shrubs themselves, and the herbaceous plants growing below them, may be mutually or reciprocally dwarf or tall), are blended, both into a very rich and a varied whole. The rich variety of stature, from that of herbaceous plants to upwards, which shrubs and trees inherit, renders them eligible instruments, in promotion of this kind of effect, to any extent equal to the height of the trees employed.

The plants contained in the flower-beds are of showy and choice kinds; and are, in their stores of blossoms, the grand fund of the splendour of the garden. The principle of disposition which has been adopted is, that of planting numerous plants of each chosen species or variety in a mass, usually a bed to each kind, with a view to the effect of all the flowers, united, of that mass; and placing the kinds of plants, the colours of whose blossoms most assimilate, asunder, in order to give the scene the enrichment of variegation. Some beds are consigned to a collection of the species of a genus; and some few to a miscellaneous assemblage of plants of various genera. The following names of the subjects of some of the beds will illustrate the two former cases: — *D*elphínium elégans flòre plèno, now flowering; Gaillárd*ia* aristàta and bícolor, both now blooming; the white double-flowered Provence rose, some flowers, the earlier, now open; beds of other kinds of roses: the varieties of rose, many of them splendid, are in high esteem here; and Mr. Redding showed us Rivers's George the Fourth, and spoke in commendation of the Wellington. Gíl*ia* capitàta, finely in flower; Czáck*ia* Liliástrum, its flowers just declining; heartseases, now blooming; *R*anúnculus asiáticus, some varieties from Italy, by Mrs. Palliser, now flowering; *P*halángium Liliàgo, the abundant white flowers of which supply, and, as successively expanded, will for some time supply, the mass of white which the flowers of Czáck*ia* Liliástrum, now declining, have previously contributed; *S*álvia fúlgens and Grahàm*i*: the plants of both these have stood in the open soil, from last year, through the winter, sheltered only by a covering of dry leaves; and all the plants have emitted from the base a copious crop of shoots, in promise of beauty of flowers in autumn. The broad-leaved species of *St*átice, not yet in flower. A collection of species of Pentstèmon: of these, P. ovàtus and P. confértus are flowering. A collection of several species of *I*'ris, some of them in blossom. Several species of *L*ílium; with some other plants towards the edge. *G*ladìolus cardinàlis, and natalénsis in the centre; both apparently recently planted out. *S*álvia *c*hamædryöìdes, Lobèl*ia* fúlgens, scarlet lobelias and *V*erbèna *c*hamædrifòlia; pinks; *O*rnithógalum latifòlium, now flowering; *S*álvia angustifòlia; *P*apàver nudicaúle, among the plants of which are varieties each with a corolla of one of the following colours, cream colour, cream colour tinted with pink, pale yellow, rich full yellow, salmon's flesh red, deeper red, and a still deeper red. The beds allotted to some of the above kinds of plants are not large; and there are beds from 1 yard to 1½ yard in diameter severally appropriated to such plants as the following: — Bouvárd*ia* triphýlla, *Nèja* grácilis, Mesembryánthemum spectábile. One bed or more to other species of Mesembryánthemum, as floribúndum, aúreum, variábile, dénsum, and others; ivy-leaved pelargonium, Linària alpìna.

There are several beds apportioned to various genera, species, and varieties of the spring-flowered bulbous plants; to the cyclamens, *D*odecàtheon Meád*ia*, and the autumnal Sternbérg*ia* lùtea. In relation to the beds for these, the principle of successive decoration is adopted; as it seems also to be, in application to any bed, as the kind of plant inhabiting it may become dormant, if perennial; or may, if annual, have finished flowering. A reserved stock of plants is kept raised and propagated, in subservience to the desired end of causing one passing course of beauty to be succeeded, as soon as well can be, by another. The following are some of the kinds employed in this service of succession; and, in some cases, more than one of the kinds are planted together in one bed: — *L*upìnus mutábilis var. Cruckshank*siànus*, Eschschóltz*ia* califórnica, hybrid kinds of Calceolària, heliotropes; Clárk*ia* pulchélla, red-corollaed and white-corollaed; Gíl*ia achilleæfòlia*, Nemóphila insígnis, kinds of Cinerària or Pericállis, *P*yrèthrum *c*oronopifòlium, *M*álva miniàta, *V*erbèna pulchélla, *V*erbèna sulphùrea, *S*enècio élegans flòre plèno, the same with the leaf variegated, Alonsò*a*, Gazània rìgens, *T*agèt*es* lùcida and flórida, Calandrín*ia* speciòsa, Erythrolæ'na conspícua, Lobèl*ia* bícolor, *s*eneciöìdes, unidentàta, and others; *A*lýssum marítimum, with the leaf variegated; Moscària pinnatífida (Gastrocárpha runcinàta), Helióphila pilòsa var. incìsa (*a*rabiöìdes *Sims*); and in addition to these, of course, a selection of the more beautiful of the older and universally known annuals. Into the beds of roses, Mr. Redding plants the varieties of georgina, which he does not find to injure rose plants; one bed of roses was cropped in the intervals with seedling plants of the *D*elphínium Consólida.

Certain of the beds are edged with wire basketwork, and have an arch of wirework over them. These are apportioned to species of climbing plants, as Cobœ'*a* scándens, Lophospérmum erubéscens, Maurándy*a* Barclay*àna*; Thunbérg*ia* alàta, this seems frequently employed; *Petùnia* phœnícea, Tropæ'olum màjus var. atrosanguíneum, &c.

A band of plants, of each of the four following species, had been disposed around as many beds, a few inches within the margin: — Omphalòdes vérna, *G*enti*àna* acaùlis, Sansevièr*a* cárnea, Andrómed*a* axillàris; and, in another part of the grounds, we saw *V*ìnca mìnor adopted as an edging under the shade of trees; and Meconópsis cámbrica forming one, either from intention or accident, in a like situation. This plant occurred in many shady dryish spots, under trees, beside the walk through the pleasure-ground, where its lively delicate blossoms had a pleasing effect.

Of the species of plants which occupy those of the beds allotted to miscellaneous plants, we noted the following, most of them in flower: — Thermópsis *f*abàcea, Dracocéphalum canéscens, *M*álva purpuràta, *P*apàver floribúndum, *A*nthýllis Webb*iàna*, Scutellària variegàta, *C*erástium Biebersteín*i*, Gàlax aphýlla, Campánula *h*ederàcea and pulchérrima, Sarracèn*ia* purpùrea; Habenària fimbriàta, not in flower; Arnopògon Dalechámp*ii*, Peltària *a*lliàcea; *R*hododéndron ferrugíneum, white-corollaed, from France; *G*erànium nemoròsum, and Stenáctis speciòsa. A plant of Lobèl*ia Tùpa*, established singly on the lawn, had sprouted vigorously; and its stem has here attained (Mr. Redding remarked), in some seasons past, the height of 6 ft.

The collection of green-house plants in this establishment is not extensive, but select. There are, for their accommodation, the conservatory attached to the mansion; a little distant from this, an antiquated conservatory, with a flat dark roof, which is now quite empty, but it is probably used to shelter plants in winter; the green-house in the range in the flower-garden; and a second green-house behind this, at a little distance from it. In the last, the following are some of the plants which were in flower: — Prostanthèra lasiánthos, a fine plant abounding in flowers, which are fragrant; Orthrosánthes multiflòra, *E*rìca cùbica and spléndens; Astélma (*G*naphàlium) exímium, in bud; Calceolària chiloénsis, *L*ílium longiflòrum, *V*erbèna venòsa; *Petùnia* phœnícea, a variety with its corolla of a delicate paler colour; and Eschschóltz*ia* califórnica, with double or half-double flowers. This last plant had been received from the Earl Mountnorris, who had divided it off a plant which had come under observation in his own garden. The fine plant of *Araucària* Cunninghàm*i*, possessed by Mrs. Marryatt, had been removed from the green-house to the open air, as had some other plants; among which was Anthocércis viscòsa, showing one of its latter, or last, flowers. In a shed contiguous to this green-house, there were four very fine plants of Kálm*ia* latifòlia, in an exquisite state of blossom; and, in some other part of the premises, we saw, flowering freely, a small plant of the white-corollaed variety of this species. In the green-house in the range, a selected collection of pelargoniums occupied a central stage, and were splendid in the "variegated show" of their most beautiful blossoms. There were here, besides, *G*ladìolus Colvíll*i* and blándus, and some other plants blooming.

In the stove, the following were the plants most notable: — Rhodochìton volùbile, a climbing plant, in general habit like a Lophospérmum, but seemingly less robust, and remarkable for a red calyx or involucre (as Rhodochìton signifies) to its corolla; which seems, in the bud, a miniature of that of Lophospérmum: this, it is believed, has never before flowered in Britain. Passiflòra alàta insígnis, a kind which Messrs. Rollison cultivated by this name two or three years ago, is now a superb ornament to the stove; it has extended many yards, and abounds in its showy flowers. This is, most probably, the P. phœnícea *Lindley*, quoted in our IX. 619. Poívre*a* coccínea had been flowering finely, and, as usual, freely. A plant, called Dracæ'na ellíptica, obtained from France in 1830, was about to flower: its leaves and rigid habit of growth are striking. Murrày*a* exótica was flowering freely; its blossoms have an odour like that of the flowers of Gardèn*ia* radìcans. These, also, were flowering: — Houttuýn*ia* cordàta, Phyllánthus turbinàtus, Strophánthus divérgens, Pitcaírn*ia* angustifòlia; *C*rìnum americànum, a few last flowers of; *C.* amábile; Alstrœmèr*ia* *Pelegrìna*, white-perianthed; and Calochórtus álbus, under tender treatment in acceleration of its growth. Oncídium papílio, the butterfly plant, had been flowering; and in the stove for forcing, there was a very fine plant of the Cymbídium *a*loïfòlium, it displayed two racemes of flowers; and a plant of Cattlèy*a* Forbès*ii* in bud.

In the hardy flower-garden there is a small aquarium; and in it, as well as in one or more of the pieces of water (one, some few acres in extent) in the park and pleasure-ground, *N*ymphæ'a álba was flowering most splendidly. *N*ùphar ádvena was also flowering; and we saw besides, in the water in the pleasure-ground, *A*'corus *C*álamus flourishing, *S*pargànium símplex flowering, and *M*enyánthes trifoliàta not in flower. There appear to be, in this demesne, so well-watered, peculiar facilities to the culture of a complete collection of hardy aquatic plants. We subjoin the names of some species which have come to mind; and which, in our hasty glance about this lovely place, we did not see.

Actual aquatics: *N*ymphæ'a mìnor, Villárs*ia* *n*ymphæöìdes, *S*tratiòtes *a*loìdes, *P*olýgonum amphíbium (How exquisitely beautiful, through the month of June, are the numerous short dense spikes of pale rosy flowers, of this common British plant, as displayed just above the surface of the water!); Jussiæ'*a* grandiflòra would probably, under the shelter of trees, survive mild winters; *C*álla palústris, *O*róntium aquáticum, Utriculària vulgàris and mìnor; Hydróchаris mórsus rànæ; the typhas, these, it is likely, would be thought too weedy. The beautiful *B*ùtomus umbellàtus, which, it is probable, is already here; the Sagittària sagittifòlia, probably, also, already here; and to this might be added the American S. latifòlia and S. latifòlia flòre plèno.

A pair of swans inhabit the large piece of water in the park, which forms a fine object from the windows of the house. — *J. D.*

ART. V. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly Number containing eight plates; 3*s*. 6*d*. coloured, 3*s*. plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly Number containing eight plates; 4*s*. coloured, 3*s*. plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Sweet's British Flower-Garden; each monthly Number containing four plates; 3*s*. coloured, 2*s*. 3*d*. plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

FACTS and Considerations which have a general Relation to Floriculture. — Certain species of plants, which, under artificial culture, are usually feeble, may be much invigorated by watering them with a decoction of other more abundant and robust species of the same genus. This was told to me by —— Forster, Esq., to whom the idea had first (if I have remembered rightly) arisen; and who had, by watering the delicate *S*axífraga cérnua with a decoction of *S*. granulàta, promoted very obviously vigour in its growth, and increase in its size; and the like effect had been produced upon *A*diántum *C*apíllus Véneris, by watering it with a decoction of *P*tèris aquilìna (I think), or some other abundant species of fern. — *J. D.*

For the names, and brief notices, of some species of plants, introduced from gardens in Italy, see p. 340. For a note on *L*ìnum monógynum, p. 356.

POLYPETALOUS DICOTYLEDONOUS PLANTS.

IV. P*apaveràceæ.*

ESCHSCHO'LTZ*IA* cròcea *Benth.*, on which we have quoted information in p. 171., is figured in the *Bot. Reg.* for June, t. 1677.

Two plants, in the garden of the Horticultural Society, are all that at present exist in Europe. In consequence of its bleeding copiously when wounded, it is not likely to bear propagation in any other way than by seed. . . . . It has not hitherto produced any seed in Britain. When the sun shines, the petals unclose, and, by their rich colour and velvety lustre, produce an effect which is, for brilliancy, unrivalled in the flower-garden. (*Bot. Reg.*, June.)

PLATYSTE'MON califórnicus *Benth.*, respecting which particulars are quoted in p. 170., is figured in the *Bot. Reg.* for June, t. 1679.

"The few seeds it produced have failed to vegetate; and the species is, therefore, lost to our gardens." Dr. Lindley has given, in the place cited, a pleasing speculation on the natural affinities of this plant.

LXII. A*ristolochièæ.*

2582. *A*RISTOLO'CHIA.
22834*a* chiléns*is* *Lindl.* Chilian ǂ △| cu 6 ? s P.G Chile 1832 ? D a.l Bot. reg. 1680
"It is nearly related to the *A*. glaúca of the south of Europe, but is very different in the form of its leaves."

"Very common in Chile, whence we have had many specimens gathered by various collectors. Mr. Bridges sends it under the name we have adopted; adding, that it is called by the Chilenos 'Oreja de la Zoera;' and that it is an herbaceous plant, found in stony places near Valparaiso and Quillota. The plant is hardy enough to bear our climate, if protected from wet and the severest cold in winter. It is figured from the collection of Robt. Bevan, Esq., Rougham, near Bury St. Edmunds, Suffolk." (*Bot. Reg.*, June.)

LXV. T*hymelæ'æ.*

87. PIMELE'A.
*h*ypericina *Cun*. Hypericum-*lfd.* ■ ⊔ or 3 sp W King George's Sd. 1830. C p Bot. mag. 3330

An interesting species in its slender twiggy habit, bright brown colour of the bark of the older branches, breadth and size (for the genus) of the leaves, and the heads, each, of numerous flowers, which crown the tips of the branchlets. "It has much of the habit and strength of growth of P. *l*igústrina *Lab.*

. . . . When treated as a hardy green-house plant, it thrives vigorously; and its "flower-heads" are, in spring, put forth "in abundance." P. *hy*pericina *Cun.* has been raised, in the Kew Garden, from seeds collected by Mr. Wm. Baxter. (*Bot. Mag.*, June.)

LXXVII. *Leguminòsæ.*

COLVI'LLE*A* Bojer. (The late *Sir Charles Colville*, Governor of the Mauritius.) 10. 1. Sp. 1.—
racemòsa *Bojer* *grand*-racemed ♀ ☐ spl 45 S Madagascar ... S p.l Bot. mag. 3325, 3326
Has not yet been introduced to Britain. It "is probably a native of the east coast of Africa; but was only seen by Professor Bojer, in 1824, in the Bay of Bombatoe, on the western coast of Madagascar, where a single tree was cultivated by the inhabitants. That indefatigable naturalist obtained one, which he took to the Mauritius, where it has perfectly succeeded; and we may soon expect to add this most ornamental plant to the stoves of our own country. Its flowering season in the Mauritius is April and May."

A splendid species of tree, from 40 ft. to 50 ft. high, with the general aspect of Poinci*àna* règia. Branches very long. Leaves alternate; bipinnate, with twenty to thirty pairs; oblong-oval in their outline, 3 ft. long. Racemes from four to twelve, 1½ ft. long; partly arising from the apex of the branches, and partly from the axils of the upper leaves. Flowers crowded. Corollas bright scarlet, rather large. Stamens twice the length of the corolla. (*Bot. Mag.*, June.)

Two Varieties of the dark-corollaed Kennèdya, of which a notice is quoted, from the *Horticultural Journal*, into our p. 285. "Messrs. Buchanan and Co., Camberwell, have a new Kennèdya in bloom, which is evidently a variety of the one we figured last month [May: see our p. 285.]. . . . The foliage differs in some degree from [that of] the one raised at Mitcham, and now at the Epsom Nursery; but the flowers are very similar." (Page 2. of the cover of the *Horticultural Journal and Florist's Register* for June, 1834.) As we have not seen a previous mention of a kind raised at Mitcham, we suppose this last to be also a variety of, and distinct from, the one of which an account is quoted in our p. 285.

MONOPETALOUS DICOTYLEDONOUS PLANTS.

CLXXV. *Lobel*iàceæ.

609. LOBE'L*IA*. [Sw. fl. gar. 2. s. 242
5102b polyphýlla *Hook. & Arnott* many-lvd. ⚹ △| or 4½ s D.P Valparaiso 1829. D lt.r
"This, mucronàta [see IX. 106.], and *Tùpa*, from the same country, are very nearly allied; being found to differ chiefly in the proportionate length of the tube of the corolla, the degree of developement of the bracteas, and in the presence or absence of downiness on the stem and leaves. L. polyphýlla has the largest bracteas, the shortest tube to the corolla, and is almost wholly glabrous." — *D. Don.*

A species "highly ornamental when grown in perfection. A plant [of it] which flowered at Boyton [in the garden of A. B. Lambert, Esq.], in the open border, in 1832, had several stems nearly 6 ft. high, with the racemes more than 1 ft. long. It thrives best in a light rich soil, and is increased by division or by seeds." The figure is copied from a weakly plant, which flowered, in Sept. 1833, in the nursery of Messrs. Allen and Rogers. The corolla is "scarcely an inch long, of a dark purple" colour. (*The Brit. Flower-Gard.*, June.)

CC. P*olemoniàceæ.*

499. GI'LI*A*.
achilleæfòlia Benth. Milfoil-lfd. ○ or 1½ au.d P California 1833. S co Bot. reg. 1682

Notice of this species is supplied in IX. 705. "It resembles G. capitàta in its foliage, and in the arrangement of its flowers; but its appearance [herbage] is much more green, and its habit is dwarfish. The flowers, too, are purple, instead of sky-blue." The corollas are, besides, larger; and the heads of flowers seem larger and less compact. "It will grow in any kind of soil, and produces seeds in abundance; so that it will soon become as common as G. capitàta itself." (*Bot. Reg.*, June.)

CCXI. S*crophularìneæ.*

65. CALCEOLA'RIA 27993 purpùrea.
3 pícta *D. Don* painted-*corollaed* ⚹ △| or 1 su W.P Eng. Garden 1832? D lt.r Sw.fl.gar.2.s.244

"An accidental variety of C. purpùrea; first raised, as we have been informed, by Mr. Wheeler, nurseryman, Gloucester. It differs from C. purpùrea in nothing but colour, and the greener hue of the whole herbage. Its copious delicate white blossoms [corollas], marked with a broad purple band, render it an agreeable addition to the already numerous cultivated varieties of this genus. C. purpùrea 3 pícta requires a light rich soil, and can be increased only by division." Mr. Gillen, gardener to Mr. M'Intosh, at the East India Docks, had communicated the specimen figured. (*The British Flower-Garden*, June.)

Of Lanària dalmática, a figure is published in the *Bot. Reg.* for June, t. 1683.; where it is deemed a ⚘ or £, 2 ft. to 3 ft. high, rather than a ⚲, 1½ ft. high.

It seems to be, when in flower, an attractive showy species. "The shoots spring straight from the ground, and rise, with very few branches, to the height of 2 ft. or 3 ft. They and the leaves are covered over with a dense bloom, which contrasts agreeably with the deep yellow of the showy flowers;" which, according to the picture, are numerous and large. It is figured from the garden of the Horticultural Society.

CCXIII. *Solàneæ.*

NIEREMBE'RG*IA* filicaùlis, of which an account is quoted in p. 176., is figured in *The British Flower-Garden* for June, t. 243.; where we are taught, in addition, that it is "a native of Entre Rios, a province of Buenos Ayres; and was raised, in 1832, from seeds sent by Mr. Tweedie to Mr. Neill of Canonmills.

Mr. D. Don saw it, in the early part of autumn, 1833, in great perfection in the open border, in Mr. Neill's garden. "The plant requires a soil composed of peat and loam, in nearly equal proportions; and is increased with facility by cuttings. Figured from the Chelsea Botanic Garden.

MONOCOTYLEDONOUS PLANTS.

CCXXXVIII. *Amaryllìdeæ.*

NA'RCI'SSUS (A'jax) moschàtus has been found *wild* in the adjoining parish of Meriden; and communicated to me by its discoverer, Miss Gresley of that place. It is quite a new plant to the British flora, I believe; and you may announce it as such, if you like. Poor Haworth would have jumped for joy at the intelligence, had he still been among us. (*Extract from a Letter from Rev. W. T. Bree, Allesley Rectory, near Coventry, Warwickshire, dated May* 20. 1834.)

CCXL. *Orchìdeæ.*

2530. CATASE'TUM 22652 tridentàtum, three-toothed *labellumed*.
2. Flowers larger, sepals and petals acute.
Syn.: C. Claveríngi Lindl. Hort. Brit. No. 22653., C. floribúndum *Hook*. Hort. Brit. No. 22654.
3. Sepals broader, labellum yellow, £ ⊠ fra 1 ... Y.Br Brazil ... D p.r.w Bot. mag. 3329

Figured from a plant which had been given to Mr. C. Horsfall of Everton, Liverpool, by Mr. Henry Harrison, who imported it from the Brazils. It has, as Mr. Evans, the able gardener, observes, an aromatic smell; and differs from my original C. tridentàtum in the larger flowers and much broader sepals. (*Hooker.*)

4 viridiflòrum *Hook.* green-flowered £ ⊠ cu 1 ... G Demerara ... D p.r.w

A specimen of this variety, as well as one of the preceding, has been sent to Dr. Hooker by Mrs. C. Horsfall. C. tridentàtum viridiflòrum "is remarkable for the greener hue of the flower, especially of the labellum, and the much longer and stronger teeth of the latter. It was introduced, from Demerara, by William Sandbach, Esq.

"In all" the varieties of C. tridentàtum, "the elastic nature of the stalk of the pollen masses is quite remarkable; in consequence of which, the latter are thrown to a considerable distance, and with much force, on the anther being removed; and they then firmly adhere, by the large glutinous gland, to whatever body they strike against." (*Bot. Mag.*, June.)

2558. BLE'T*IA*.
22753*b* grácilis *B. C.* slender-*scaped* ⚘ ⊠ pr 1½ jl.au Y.R Mexico 1830. D p.l Bot. reg. 1681

A "species very distinct from any previously described."

The slender scape bears, towards its tip, three or four flowers, whose sepals and petals are of an obscure yellow colour, tinted with a rosy one; the labellum, veined, is rosy at the base and yellow at the tip. B. grácilis "requires the treatment of B. verecúnda, acutipétala, and Shephérdi." Messrs. Bateman, and the Rev. and Hon. W. Herbert, possess plants of this species; and Messrs. Loddiges, who introduced the species, have figured it in t. 1681. of their *Botanical Cabinet*. (*Bot. Reg.*, June.) See p. 288.

CCXLVII. *Asphodèleæ.*

1078. MI'LL*A*. [Bot. mag. 3327
uniflòra *Grah.* solitary-flowered ♉ ⌋ or ♉ d.mr W.L Buenos Ayres 1832. O p.l

Dr. Gillies discovered it in 1820. Mr. Tweedie sent roots, in 1832, to Mr. Neill, in whose green-house, at Canonmills, this species flowered in December, 1832, and again in March, 1834. Corolla, when expanded, 1½ in. across, white; marked, from the base of the tube to the tip of the six segments, with six dark lines, which are purplish-green behind, lilac in front. This species yields, when bruised, the most powerful scent of garlic. (*Bot. Mag.*, June.)

PLANTS DEVOID OF LEAF AND FLOWER.

3274. *URE'DO* 27927 suavèolens *Pers.*

Synonyme: *Æcídium cárdui Sowerby*, who has given a figure of it in his *Coloured Figures of English Fungi*, iii. t. 398. fig. 5.

Early in June, 1833, I observed, in a group of plants of *C*nìcus arvénsis *Sm.* (*C*írsium arvénse *Lam.*), one plant of a yellow brown hue, and more luxuriant than the rest. It was the subject of a parasitic fungus abounding all over it, and with which the luxuriance was doubtless connected: and hence this luxuriance may be assumed to have been, like that of the leaves of *A*nemòne coronària (described in IV. 192.), a morbid one. I sent a specimen of the fungus-inhabited *C*nìcus to Mr. J. D. C. Sowerby, who identified the fungus as the *Æ*cídium *c*árdui above quoted. This specimen, returned by Mr. Sowerby, gave out a very sweet and grateful odour for some months; and, even now (June 11. 1834), may be, on being smelled to, perceived to be fragrant. On consulting *Hort. Brit.*, the only species which seemed to me likely to be identical with this is the *U*rèdo suavèolens *Pers.*; and Mr. Baxter of the Oxford Botanic Garden, to whom a question on its identity has been submitted, has answered it thus: — "Persoon describes his *U*rèdo suavèolens as growing on the leaves of *C*nìcus arvénsis *Sm.*; and I find it abundant on that plant in the neighbourhood of Oxford. Mr. Sowerby's *Æ*cídium *c*árdui is said to grow on the leaves of *C*nìcus praténsis *Willd.*, a plant which is also not very uncommon near Oxford; but on which, while in a living state, I have not at present observed any species of fungus to be parasitical. May not the word praténsis, in Mr. Sowerby's work, be a misprint for arvénsis? especially as the bit of a leaf represented at t. 398. fig. 5. bears a greater resemblance to the foliage of *C*nìcus arvénsis than it does to that of *C.* praténsis. Specimens of *U*rèdo suavèolens of Persoon, on the leaves of *C*nìcus arvénsis, from this neighbourhood, accompany this letter." — *W. Baxter. Jan.* 24. 1834. The figures of the leaf in Sowerby's figure does, as Mr. Baxter has remarked, exactly resemble the leaf of *C.* arvénsis, and but little, or not at all, that of *C.* praténsis. It is worthy of remark, that, early in June, 1834 (that is, at the same time as in 1833), I have found the *U*rèdo suavèolens *Pers.* (*Æ*cídium *c*árdui *Sow.*) flourishing upon plants of the *C*nìcus arvénsis *Sm.* in the same group of them as that in which I gathered them last year. This notice may appear in time to induce brother gardeners to gather, this year, specimens for themselves (as the species is probably of as universal occurrence as the *C*nìcus arvénsis itself), and witness its powerful and pleasant odour. — *J. D. June* 11. 1834.

Corrections.

Zappània nodiflòra 2 *r*ósea, in p. 176. insert "2" before *r*ósea. On May 1. we saw a stock of plants of this interesting miniature ornament of the garden in Mr. Knight's nursery, King's Road, Chelsea.

Triteleìa, in p. 178. (*Treis*, three, *teleios*, perfect; six stamens are produced in each flower, but only three of the six bear perfect anthers.)

ART. VI. *Retrospective Criticism.*

THE magnificent plant of Hòvea Célsi, exhibited at the Metropolitan Flower Show, April 16., and said by us (p. 235.) to be sent by Mr. Harrison of Cheshunt, was, we find, sent by Messrs. Rollison of Tooting. Messrs. Rollison inform us that it was one of that abundant stock of young plants which we noticed in VI. 622.

Our Notes on Highclere. (p. 258.) — My dear Sir, I have wondered very much why you, in your account of Highclere, p. 258., should state so many untruths, which may be so easily detected. You say that Lord Caernarvon has not laid out more than 20*l.* on nursery plants during the last twenty years. The fact is, Lord Caernarvon has paid me for nursery plants, in the last fourteen years, more than 160*l.* The next charge you make is, that more has been charged for American plants by nurserymen, than many gentlemen can afford to give. How or where you conceived such an idea, it is difficult to imagine. Now, my dear Sir, it was easy for you to know that American plants are raised in immense quantities in this country from one end of it to the other, at very low prices, less than half what Mr. Carr of Philadelphia, and other American nurserymen, charge for them. You know also that so many are raised, and by so many people, that it is impossible to sustain an exorbitant price. So much for that.

Now, the third and last statement which you make is equally devoid of truth; viz., that nurserymen have multiplied tenfold during the last thirty years. This I deny; and can prove that a decrease of more than one half has taken place in that time. It is capable of proof that more than 1000 acres of nursery land have been cleared in the time alluded to, from several of the proprietors being in insolvent circumstances; and certainly, in all the country, not 500 acres have been taken into cultivation as nursery ground instead. — *William Malcolm. Kensington, June* 6. 1834.

The circumstance of not more than 20*l.* having been paid at Highclere for nursery plants during the last twenty years, we stated on authority which we have not the slightest reason to doubt. It is evident from the context that American nursery plants are meant, and not nursery plants generally, which may have been bought to the extent mentioned by Mr. Malcolm, without including any American plants among them. We are quite aware that American plants may be raised much cheaper in England than they can be in America, and also that they are now, and have been for some years past, selling at such a low price by British nurserymen, as hardly to remunerate them. But, low as this price is, it may still be too high for many gentlemen, who are just as poor in their way as the nurserymen. We admit, and, indeed, we have stated above a year ago (VIII. 129.), that the nursery business is at a very low ebb. We regret exceedingly that any thing should have escaped from our pen to induce so highly valued a friend as Mr. Malcolm to think that we had any other than the very best feelings towards nurserymen, and, indeed, towards every description of gardeners, either generally or particularly. — *Cond.*

St. Michael's Mount, Cornwall. — The sketch given, with a brief description of St. Michael's Mount, attached to my article upon the evergreen oak [IX. 543.], was only meant to give an idea of the situation of the gardens; whereas, placed as it there is, in connection with the reading, it appears as if it were designed to give a general view of the Mount. This was not my intention, there being only a part of it represented. The accompanying sketch (*fig.* 69.) will better answer this purpose. It is a north view, as seen from the land when the tide is receding, and thereby discovering the line of the causeway, or approach to the Mount, when the tide is out. The mass of rock in the foreground is called "the Chapel Rock," on which tradition reports a chapel, dedicated to the Virgin Mary, to have once stood; close to which, but leaving it on the left, the causeway is continued until it reaches the

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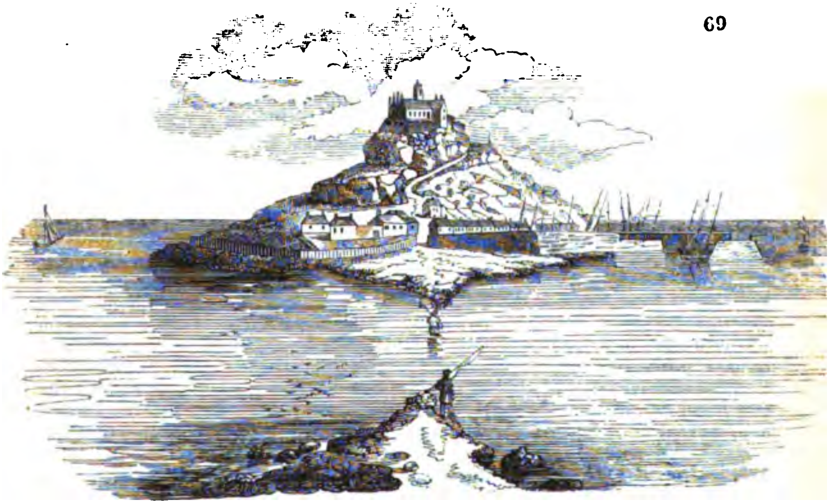

land. This venerable monument of antiquity has borne different names at different periods. According to the register book of Landaff, its earliest name seems to have been "Dinsol or Dunsul," which has been interpreted "the hill dedicated to the sun," and the "hill of prospect." By Ptolemy, Carew, Tonkin, Borlase, Britton, and Brayley it was called by different names in the ancient Cornish language; all of which signify, according to William of Worcester, "Le Hore Rok in the Wodd," or the hoary rock in the wood; and William of Worcester, Drayton, and Carew assert that it was anciently covered with trees; whilst tradition reports that it was connected, by a large tract of land, full of churches, with the Isles of Scilly. William of Worcester also says, that before the tenth century it lay six miles within land, enclosed by a thick wood, affording shelter for wild beasts, amid a variegated scenery of meadows, fields, groves, trees, villages, and churches; all of which, with a large tract of ground called the "Lioness," were submerged by the ocean: and Tonkin says, it amounts almost to a certainty that much land hath been lost by inundation round the Mount and adjacent country; whilst Leland remarks, that "in the baye betwyxt the Mont and Pensants be found, nere the lowe water mark, rootes of trees yn dyvers places." In corroboration of at least some of the above statements, Gilbert, in his *Historical Survey of Cornwall*, informs us, "that, about sixty years since, an oak tree of considerable size, with roots and limbs to it, and the roots stuck fast in the very mould it grew in (a black moory sort of earth), was taken up between the Mount and Penzance." This tree was discovered at a very low ebb of the tide; and Mr. Giddy of Penzance some years ago discovered, at an extraordinary recession of the tide, several stumps of trees in their native soil, with the roots shooting out from them, and with their stems apparently cut off. A vast number of hazel boughs, with perfect nuts adhering to them, have also been found between Marazion and Penzance, below the natural bed of the soil. To account for the above extraordinary inundation, Gilbert, in his *Historical Survey*, has a note upon it, which runs thus: — "The grand encroachment of the water upon the land plainly resulted from a preponderance of the Atlantic upon the Cornish shores, occasioned perhaps by a proportional secession from the shores of America. It is this preponderance which has thrown such a volume of waters on the Scilly Islands, as to break the ten isles of Strabo into a hundred and forty islets, and has left only their mountains to testify of their existence," &c.; and Mr. Whitaker, he says, "cites a mass of authorities in favour of this fact." It appears, therefore, from the above abridged and concise accounts, that the Mount was, in remote ages, attached to the main land, and that it had its share of trees and foliage, which rendered it a very different spectacle from what it at present exhibits. It naturally follows that the neighbouring country around was, in those days, furnished with wood to a greater extent by far than it is at present: in proof of which, there are many places at this day to the names of which the word "wood" is attached, but where now there is scarcely a tree in existence; such as "Clawance Wood," "Binner Wood," "Kirton Wood," &c. Perhaps, in those days, when the country was broader in extent than at present, the sea air was less injurious to vegetation, and therefore trees would grow better: but whatever might then have been the state of that part of the island, it is now, with the exception of gentlemen's seats, parks, and villas, nearly destitute of foliage, and, what is worse, the farmers in general are mortal enemies to any thing like a tree growing on their estates, with the exception of a few that may happen to be sprinkled round their houses, farm buildings, and orchards. This is to be accounted for by the farms being generally small and the rents high, which makes every inch of ground valuable. Even the shadow of a tree upon any part of the land makes the farmer uneasy; and if the land happens to be his own freehold, the axe is immediately applied; while, if at rack-rent, or on lease, ten to one if the landlord or his steward is not applied to for permission to remove it as a nuisance. The farmer, therefore, regardless of shelter for his cattle, or of beautifying the country, must not be looked up to even as an auxiliary in the business of enriching it with trees: it is the gentlemen of the county, and those in possession of large tracts of landed property, who must be expected to achieve this. Would they, instead of planting their ten or fifteen acres annually, triple or quadruple the quantity, much would be done, in the course of half a century, towards rendering the country far more interesting and agreeable than it is at present. The small town which is situated at the bottom of the Mount is inhabited chiefly by fishermen. The nets, or seines, as they are called, which they use during the pilchard season, are of immense length and depth; and, in corroboration of what Mr. Main says (IX. 723.), it is customary to send them to the tan-pits every season before they are used, or rather to boil them in an infusion of bark, in large coppers for the purpose. It has been hinted to me that no good is gained by sending garden nets to be tanned; but I doubt the truth of this. The opinion on which it is founded may, I think, be accounted for by the fact, that most garden nets are nothing more or less than old fishing-nets, nearly worn out before they are purchased, and consequently their strength is too far spent to be restored by tanning. Were garden nets to be bought in new, I have no doubt that frequent tanning would be of great service. However, fishing-nets have the advantage over garden nets, in being less exposed to the action of the weather: the former are only used in the season when the particular sort of fish they are intended for makes its appearance, and are afterwards carefully dried and laid by; whereas garden nets, independently of their being more frequently in use, are generally taken less care of. The town of Marazion, which faces the north side of the Mount, is perhaps the warmest, in winter, of any town we have in England, being completely sheltered from the north winds by the rising ground in its rear, which shelves down so as to expose it to the south in such a way as to receive all the advantages of the sun's rays. The influence of these rays there is equal to that at many other places where the sun is at a much higher degree of altitude: this, in connection with its southern situation, renders the temperature always mild. From these local advantages, handsome bouquets of double hyacinths, anemones, jonquils, violets, &c. can be gathered at Marazion nearly a month sooner than in the places adjacent; whilst China roses may be seen almost perpetually in bloom. Many annuals, also, such as mignonette, sweet alyssum, &c., often continue in blossom throughout the winter. — *T. Rutger. Shortgrove, April,* 1834.

Art. VII. *Queries and Answers.*

Of the following Vegetable Products, which yields the greatest quantity of food for live stock? and what is the produce under different circumstances? The results should be stated in the proportion of the weight of produce per acre; and a notice of the proportion of manure used per acre should be coupled with the statement.—Potatoes, lucern, saintfoin, prickly comfrey, cabbage, rye cut green, leaves of the yellow beet, Swedish turnips, artificial grasses, &c. Information from various places, upon all or any of the objects included in my query, or upon any object of a congenial nature, will oblige — *W. A. Stoke Newington.*

Paint combining Colour with Durability. — I should be glad to be informed by one of your chemical correspondents of the kind of paint, combining colour with durability, which is the most appropriate for painting conservatories, forcing-houses, &c.: also, by mixing lampblack with white lead, in order to obtain a lead colour, if strength is added to the consistency, or otherwise; and if otherwise, what ingredient is considered as efficient to neutralise the ill effects of the lampblack? — *T. Rutger. Shortgrove, May,* 1834.

Arboretums. — Having noticed your article upon arboretums (p. 166.), I can bear testimony to the truth of W. Harrison, Esq., having a good collection of the genus *Pìnus*. . Mr. Harrison has also a good collection of the genus

Ilex (holly); but, for reasons best known to himself, they are planted so as to form a clipped hedge, as a fence between a field and his arboretum. I must confess it was with regret that I observed this, as I conceived they were well worth a place detached from each other, either upon the lawn, or in a compartment by themselves. Mr. Harrison's garden, taking into consideration its small extent, will, I think, gratify any person who may visit it, as there is a considerable degree of taste displayed therein, the merit of which is, I believe, wholly due to the proprietor himself. — *T. Rutger. Shortgrove, May*, 1834.

Willow for Hoops. — Can any of your correspondents state the botanical name of the sort of willow used by the Dutch for hoops, and of which the bark is of a dark brown or red colour? If grown in this country, where? — *C. M. W. London, Nov.* 26. 1833. *Sàlix triándra*, very probably; and, if so, it is the species which is more extensively cultivated, in all the osier holts of England, than any other species. — *J. D.*

ART. VIII. *Covent Garden Market.*

	From			To		
	£	s.	d.	£	s.	d.
The Cabbage Tribe.						
Cabbage, White, per dozen	0	0	9	0	1	6
Plants or Coleworts	0	1	6	0	2	0
Cauliflowers, per dozen	0	1	6	0	3	0
Legumes.						
Peas, per half sieve	0	1	0	0	1	6
Peas, per sieve	0	2	0	0	3	6
Peas, per sack	0	6	0	0	10	0
Beans, per half sieve	0	0	9	0	1	3
Windsor, per half sieve	0	0	9	0	1	3
Windsor, per sack	0	5	0	0	7	0
Kidneybeans, forced, per hundred	0	1	6	0	0	0
Kidneybeans, forced, per half sieve	0	7	0	0	10	0
Tubers and Roots.						
Potatoes, per ton	6	0	0	7	0	0
Potatoes, per cwt.	0	6	0	0	7	0
Potatoes, per bushel	0	3	0	0	4	0
Kidney	0	3	0	0	4	0
Scotch	0	3	0	0	4	0
New, per pound	0	0	1	0	0	6
Turnips, White, per bunch	0	0	3	0	0	6
Carrots, per bunch:						
Young	0	0	6	0	0	8
Horn	0	0	6	0	0	8
Horseradish, per bundle	0	2	6	0	5	0
Radishes:						
Red, per dozen hands (24 to 30 each)	0	0	9	0	1	0
White Turnip, per bunch	0	0	1	0	0	1½
The Spinach Tribe.						
Sorrel, per half sieve]	0	1	0	0	1	3
The Onion Tribe.						
Leeks, young, per doz. bunches	0	3	0	0	6	0
Garlic, per pound	0	0	8	0	0	0
Shallots, per pound	0	1	0	0	0	0
Asparaginous Plants, Salads, &c.						
Asparagus, per hundred:						
Large	0	3	6	0	6	0
Middling	0	1	6	0	2	6
Small	0	1	0	0	1	6
Lettuce, per score:						
Cos	0	1	0	0	3	0
Cabbage	0	0	9	0	1	6
Celery, new, per bundle (12 to 15)	0	1	6	0	2	0
Small Salads, per punnet	0	0	2	0	0	3
Watercress, per dozen small bunches	0	0	4	0	0	6
Burnet, per bunch	0	0	2	0	0	0

	From			To		
	£	s.	d.	£	s.	d.
Pot and Sweet Herbs.						
Parsley, new, per half sieve	0	1	6	0	3	0
Tarragon, per dozen bunches	0	4	0	0	5	0
Fennel, per dozen bunches	0	1	6	0	0	0
Thyme, per dozen bunches	0	2	6	0	0	0
Sage, per dozen bunches	0	2	0	0	0	0
Mint, per dozen bunches	0	5	0	0	6	0
Peppermint, per dozen bunches	0	2	0	0	0	0
Marjoram, per dozen bunches	0	4	0	0	0	0
Savory, per dozen bunches	0	3	0	0	0	0
Basil, per dozen bunches	0	6	0	0	0	0
Rosemary, per dozen bunches	0	6	0	0	0	0
Lavender, dried, per doz. bun.	0	2	6	0	0	0
Tansy, per dozen bunches	0	1	6	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Angelica Stalks, per bundle	0	1	6	0	0	0
Edible Fungi and Fuci.						
Morels, per pound	1	0	0	0	0	0
Truffles, English, per pound	0	14	0	0	0	0
Foreign	0	14	0	0	0	0
Fruits.						
Apples, Dessert, per dozen:						
Juneating, new, per ½ sieve	0	3	6	0	5	0
Baking, per bushel	0	6	0	0	10	0
American, per dozen	0	10	0	0	12	0
French, per bushel	0	7	0	0	8	0
Peaches, per dozen	0	12	0	1	4	0
Nectarines, per dozen	0	12	0	1	4	0
Almonds, per peck	0	7	0	0	8	0
Cherries, per pound:						
Dukes	0	1	6	0	2	6
Circassians	0	3	0	0	5	0
Common, per dozen	0	2	0	0	3	0
Gooseberries, per half sieve	0	2	6	0	3	0
Early Seedling ripe	0	5	0	0	7	0
Currants, for tarts, per ½ sieve	0	5	0	0	7	0
Raspberries, Red, per gallon (2 pottles)	0	0	6	0	0	9
Strawberries, per gallon (2 pottles) about 3 pints	0	0	9	0	2	6
Knevett's new Pine, p. pottle	0	1	6	0	0	0
Myatt's new ditto	0	2	6	0	0	0
Pine-apples, per pound	0	6	0	0	10	0
Grapes, Hot-house, per pound	0	4	0	0	8	0
Melons	0	3	6	0	10	0
Cucumbers, frame, per brace	0	0	6	0	1	6
Oranges, per dozen	0	0	9	0	2	6
Oranges, per hundred	0	4	0	0	16	0
Lemons, per dozen	0	0	9	0	2	0
Lemons, per hundred	0	6	0	0	12	0
Sweet Almonds, per pound	0	2	0	0	2	3
Brasil Nuts, per bushel	0	14	0	0	16	0
Spanish Nuts, per peck	0	4	0	0	0	0
Barcelona Nuts, per peck	0	5	0	0	0	0

Observations. — The market has been well supplied with every article usual at this season, of good quality, and at moderately reasonable prices. The prevalence of hot and dry weather has forced most of the articles to perfection rather precociously as to season. Of peas (although the early crops were much injured by the frosts in May) we have had abundance, which have realised a fair remunerating price; the qualities of the early varieties has not been so good as usual, but the later sorts, which are now coming to hand freely, are excellent; such as the varieties of marrows, dwarf imperials, and cimeters; which the late refreshing rains will necessarily improve. Beans are not yet in general supply, but those which have been furnished are of good quality, and quite clear from the blight which more or less usually affects them during the prevalence of dry and hot weather. Cauliflowers are not so fine as usual at this season, nor are they in such abundance; the season being unfavourable to their growth during the past and present months. Turnips are scarce, and generally of indifferent quality. Carrots have been much blighted, and are consequently deficient in quantity. The season for asparagus is now over. The supply throughout has been good, and, from the general prevalence of warm weather, which is favourable to its perfection, has been of excellent flavour and size. The crop of strawberries is considered deficient, but the supplies, from those who possess the necessary means of watering them, have been considerable. Good prices for those of the best quality have been maintained, and will most probably continue through the season. Cherries are reported as an abundant crop throughout the whole of the districts in which they are generally cultivated; the supply to the market is good, and excellent in size and flavour. The prices at present very moderate, affording an opportunity of enjoying this delicious fruit to all classes. Raspberries are very plentiful, and at present excellent, and likely to be very cheap. Currants are also a good crop; and will, no doubt, should the weather remain fine, prove of good quality, and at moderate price. The evidence of supply to the markets of the metropolis may be determined by the facts of the quantities of any given article as furnished to this alone: for instance, of peas, during the week ending on Saturday the 21st, no less than 6000 sacks, and 4000 sieves, equal to 22,000 bushels, were actually pitched and sold. Of cherries, 4000 sieves, of 48 lb. each. Of strawberries, many thousand pottles have been daily supplied. The stock of potatoes is now nearly exhausted. The prices have been higher than usual at this season; the prospect of crop of the early varieties decidedly bad; the later sorts will probably rally after the late refreshing showers. — *June* 26.

[The plants in pots, and the cut flowers, exposed for sale in this market, though seldom noticed in our reports, are, throughout the year, most abundant. There are compartments, on the ground floor, both in the open air and under cover, entirely devoted to flowers; independently of the ample display in the two Bedford conservatories. With these two public conservatories may now be classed the magnificent one at the Pantheon Bazaar, Oxford Street, mentioned p. 277. Taking this bazaar altogether, as a piece of interior architecture, as a place of exhibition of pictures, sculptures, and other works of art, as a promenade of the fashionable world, and as a scene of elegant commercial industry, we know of nothing equal to it in London.]

ART. IX. *London Horticultural Society and Garden.*

MAY 20. 1834.—Of books presented, we notice Pomona Italiana, Nos. 32. and 33.; and Dr. Daubeny's Inaugural Lecture on the Study of Botany.

Read. A Description of a hot-water apparatus; by A. Cruckshanks, Esq.

Exhibited. Specimens of the sweet-scented vine, from Mr. J. Kirke. Renanthèra coccínea, from S. F. Phelps. *O′*xalis Pióttæ, a species of Bignònia from Trinidad, Oncídium papílio, &c.; from Mrs. Marryat. A model of a stand for conveying flowers from a distance, from J. H. Vivian, Esq. Hybrid kinds of Calceolària, from between C. Fothergílli and C. suberécta; from Mr. B. Fielder, gardener to Wm. Linwood, Esq., Forty Hill, Enfield. Deútz*ia* scàbra and a variegated Camél*lia*, from T. C. Palmer, Esq.

Also, from the Garden of the Society. *Camássia* esculénta, Bignò*nia* capreolàta, Duvaú*a* latifòlia and depéndens, *Æ*thionèma Buxbaúm*i*, *C*ratæ`gus *O*xyacántha *r*òsea supérba; *L*upìnus polyphýllus, polyphýllus white-corollaed, tomentòsus, tomentòsus var. nànus, rivulàris; *S*olànum críspum, Collíns*ia* grandiflòra and a species from Mr. Douglas, Pentstèmon procèrus, confértus, Scoúleri, ovàtus; Drummond's thornless rose, *T*éllima grandiflòra, Libér*tia* formòsa, Collòmia coccínea, Calceolària excélsa Táylori, viscosíssima, Thermópsis *f*abàcea, *L*áthyrus califórnicus, Hàke*a* pugionifórmis, and kinds of Azàlea, *R*hododéndron, and *P*æò*nia*.

June 3. — *Books presented.* Part ii. of vol. ix. of the Transactions of the Berlin Horticultural Society. Vol. ii. of Description, &c., of the Vines of Hungary: presented by the author, Mr. Francis Schams. Acta Academiæ Naturæ Curiosorum of Bonn; tome xvi. part 2.: presented by the Academy.

Exhibited. A double cucumber, from the Hon. and Rev. J. Douglas.

Also, from the Garden of the Society. *L*upìnus ornàtus, arbòrea, &c.; Libér*tia* formòsa, *L*ìnum monógynum [In August, 1833, we saw this in the Society's Garden: it is ♃ △ or. 2 ft. jn.au. W. The styles were then five in number in each flower; which fact teaches that the specific epithet is not well applied to this plant], hybrid gladioluses, Phacèlia tanacetifòlia, Eriophýllum cæspitòsum, Brodiæ`*a* congésta, *P*æò*nia* albiflòra var. Whitlèyi, and other Chinese and garden roses, among which were Pallavicìni, yellow sweetbriar, rùga, and Lord Caernarvon's sweet-scented.

The Show at the Horticultural Society's Gardens, on Saturday the 7th inst., went off, as the phrase is, in the most desirable manner, nearly 3000 persons being present. So great was the crowd round the stage on which the flowers and fruits were exhibited, that we could not get sufficiently near to do equal justice to all the exhibitors; and, therefore, we prefer simply giving a list of the prizes, and of the names of the persons to whom they were given. We have since been informed, that all inconvenience of this kind will be obviated.

The gold Banksian medal: 1. For grapes and pines, exhibited by Mr. Dowding, gardener to Lady Clarke; 2. For a miscellaneous collection of flowers, from Mrs. Lawrence, F.H.S.; 3. For garden roses, from Mr. T. Rivers of Sawbridgeworth.

The large silver medal: 1. For garden roses, from Mr. Stephen Hooker, F.H.S.; 2. For a miscellaneous collection of plants, from Mr. Seward Snow, gardener to J. H. Palmer, Esq. F.H.S.; 3. For stove and green-house plants, from Mr. John Green, gardener to Sir E. Antrobus, Bart. F.H.S.; 4. For China roses, from Mr. Stephen Hooker of Brenchley, F.H.S.; 5. For pine-apples, from Henry John Grant, Esq. F.H.S.; 6. For pelargoniums, from Messrs. Colley and Hill of Hammersmith; 7. For forced fruit, from Mr. W. Deas, gardener to the Duke of Norfolk, F.H.S.; 8. For forced fruit, from Mr. Hugh Frazer, gardener to Sir C. Sullivan, Bart. F.H.S.; 9. For alstrœmerias, from Charles Barclay, Esq. F.H.S.

The silver Banksian medal: 1. For roses, from Messrs. Rollison of Tooting; 2. For a miscellaneous collection of plants, from Mrs. Marryatt, F.H.S.; 3. For rhododendrons, from Mr. Waterer of Knapp Hill; 4. For American plants, from Mr. Waterer of Knapp Hill; 5. For pelargoniums, from Mr. Wilson of Clewer Lodge; 6. For heartseases, from Mr. George Glenny of Twickenham, F.H.S.; 7. For calceolarias, from Mr. John Green, gardener to Sir E. Antrobus, Bart. F.H.S.; 8. For ranunculuses, from Mr. Henry Groom of Walworth, F.H.S.; 9. For balsams and cockscombs, from Mr. Cock of Chiswick; 10. For pinks and picotees, from Mr. Hogg of Paddington; 11. For a new Frontignac grape, from Mr. John Wilmot of Isleworth; 12. For strawberries, from Mr. C. Knevett of Turnham Green; 13. For cucumbers, from Mr. Seward Snow, gardener to J. H. Palmer, Esq. F.H.S.

THE

GARDENER'S MAGAZINE,

AUGUST, 1834.

ORIGINAL COMMUNICATIONS.

ART. I. *Notes made during a Professional Journey through Belgium and Part of France, for the House of Messrs. Low and Company, Nurserymen, Clapton, in March and April,* 1834. By Mr. WILLIAM GARVIE, Foreman in the Clapton Nursery.

I LEFT London on the 8th of March, for Ostend. I observed here what I had never seen before, viz., that the immense quantities of long-legged pigs, which were feeding on the green parts of the ramparts, were all tied round the neck with a halter, no doubt to prevent them from falling into the steep surrounding ditches. The sand along the shore seems, in dry weather, to blow to a great distance, and in many places lies in large wreaths like snow. There being nothing in the town, or immediate neighbourhood, in the way of nurseries or gardens, no doubt owing to its nearness to the sea, my stay here was as short as circumstances would permit.

I proceeded from Ostend to Bruges by the treck-schuyt, or passage-boat, along the great canal; a mode of conveyance which, where it can be met with, is far superior to going by the diligence, on account of the rough paved roads, which are common on the Continent, where no great progress has yet been made in macadamising. These boats are very well fitted up for the accommodation of passengers, the first or best cabin being equal to that of a Margate steamer. What is called the *barque de nuit* (night boat) is provided with good beds, where a person may sleep as comfortably as in an inn, there being but very little noise on deck. Breakfasts and dinners are provided regularly at the proper hours, and every other sort of refreshment is sold at a very reasonable rate. Soon after leaving Ostend, the country is marshy and barren, the canal lying several feet above it, and being bounded by steep banks. As you advance, the soil greatly improves; and, I was informed, produces good crops of wheat, rye, and barley.

Towards *Bruges* the country is beautiful, being well wooded, and the fields being in a high state of cultivation. The approach to the town, through a fine avenue of elm trees, is really beautiful. It is surprising that such a large town, with the facilities for trade afforded by its canals, should be at present so very dull. After nightfall, not a person is to be seen in the streets, and every place seems as quiet as if there were not a living creature in the town. From the extent of the place, I expected to find some good nursery gardens, but these are few and unimportant. There is no botanic garden; but there is what they call a philharmonic garden, supported by subscription, the use of which is, as the name implies, for the subscribers and their families to assemble in on Sundays and holidays during the summer season, to enjoy music, and partake in other amusements. This garden is neatly laid out, and well answers, no doubt, the purpose for which it was designed. It contains some fine clumps of the different varieties of azaleas, rhododendrons, and Chinese and Noisette roses, &c.; and there is a neat plain building in the centre, where the members have their public meetings. I visited several private gardens near Bruges, but found nothing in them at all interesting. From Bruges to Ghent you pass through a beautiful level country, well cultivated, and finely diversified with wood and water; the different branches of the great canal meeting the eye at almost every turning, the noble avenues of elm and other trees planted in straight lines along the roadside, and the similar avenues branching off right and left, give a fine variety to the appearance of the country, and have altogether a pleasing effect to the eye of a stranger. Not a single patch of ground seems to be left unoccupied; every place is either under cultivation, or in woods; even the small open drains that take the water off the fields, and divide one from another, are planted with rows of alders or hazels on each side. These trees are cut down every seven years, or so, for hop poles, and for many other purposes. The farmers seem to be rather an industrious set of men; but, from the low prices at which they sell the produce of their land, they are poor. The horses here seem well adapted for heavy work, being short and stout built; and, from the sort of reins generally used, they must be extremely docile, and easy to manage. A great deal of the field labour, where the farms are small, which is very often the case, is performed by the spade instead of the plough; and the sandy nature of the soil renders spade operations particularly easy.

The approach to *Ghent* is not so good as that to Bruges; and there are not any fine avenues of large trees, most of them being lately planted. Ghent, it is well known, is a large manufacturing town; and before the last revolution it was a flourishing place: but at the present time its trade is very much injured, nearly one half of the manufacturers being out of work, and many others only working a few days a week. The nursery gardens here are numerous, and some not of an insignificant description. The first is that of Messieurs Verleeuwen, brothers, who cultivate a good collection of exotic plants. Their grounds, although small, contain two neat houses for stove plants, and six for New Holland plants and camellias: one of the latter has been lately built, with a large bed in the back for the planting out of the newest and best varieties. The place is altogether in good keeping, and the plants are exceedingly healthy. Messrs. Verleeuwen have commenced growing *Orchídeæ* within the last year; and some good and rare species of these plants have been lately imported, by one of the brothers, from England. The next nursery is that of M. van Geert, who chiefly cultivates the same sort of plants as Messrs. Verleeuwen; but his collection is neither so select, nor so rich in expensive plants. Camellias he grows beautifully, and increases fast, having a quantity of large stools planted out in a bed in one of his houses, which enables him to increase them much faster than in the common way. He also grows a great many pear trees *en pyramide*, azaleas, magnolias, &c. &c. There are in his garden at present some of the finest specimens of Magnòl*ia* conspícua in flower I háve ever witnessed; being one complete mass of bloom from top to bottom. The next nursery I visited was that of M. Alexander Verschaffelt, whose grounds are more extensive than those of the former, as he grows a great quantity of azaleas, magnolias, and many other American plants. He has obtained several good varieties of magnolias from seed, and also a number of fine azaleas. He has several large houses for New Holland plants and camellias. Like most other nurserymen, during the present rage for the *Orchídeæ*, he has constructed a small house on purpose for that order of plants. M. Verschaffelt seems a very industrious and civil man, and deserves encouragement. There are many other nurserymen of less importance, the principal articles cultivated by whom are for the supply of the market; and the superior beauty of the articles produced is surprising, considering the small price for which they sell. Camellias seem to thrive with them admirably, they have an immense number of varieties; but many of these are not worth cultivation, their best varieties being received from England: there are, however, some exceptions. The family of *Erìca* seems to baffle all their skill, as there is not a good-looking plant of that genus anywhere to be found, unless it has been received direct from England. The Belgic nurserymen generally lose heaths so soon after their arrival, as to be very shy of importing the expensive sorts from England: they say it is the heat of the climate that kills these plants; but, in my opinion, it is want of proper treatment, as in some parts of France, which must be quite as hot as any part of Belgium, they are cultivated with success. In Belgium, the heaths are generally placed on the front platform of the plant-houses, the front sashes of which being never made to open, no free circulation of air can reach the plants: they are drawn up slender, the damp gets hold of them, and they soon die. If any of the Belgic admirers of *Erìca* would construct a small house or pit in a dry airy situation, and contrive the sashes in such a manner as that they might be entirely removed in mild weather during winter, and bestow the following treatment on the plants, I have not the least doubt that they would succeed to their utmost wishes. When the weather is frosty, I would cover the house well with mats or straw, instead of using fire heat, as the latter is well known to be very injurious to this tribe of plants; and I would shade it well in summer, when the weather is hot, and the sun strong in the middle of the day; always admitting plenty of air, by tilting up the sashes behind, and at night removing the sashes entirely, so that the plants might have the benefit of the dews.

The finest private garden near Ghent is that of M. Mechelynck, an opulent merchant, and a most enthusiastic lover and promoter of gardening. He has an excellent collection of stove and green-house plants, camellias, &c.; among the former he has some splendid specimens of rare plants, which are in an excellent state of keeping. The young man who acts as gardener. seems as enthusiastic as his master, and the management of the place does him great credit. M. Verplancke has also a beautiful garden; but the manner in which it is laid out, and the want of evergreens, give it a cold and meagre appearance, compared with places of the same sort in England. There is here one of the most neatly constructed green-houses of iron I have ever seen; but the collection of plants in it is not good: it is a great pity to go to so much expense in fitting up a house, and then not to fill it with good plants; the one corresponds so badly with the other. I would much rather have seen it the other way.

Mr. Maddison, at Wondelgem, a few miles from Ghent, has one of the neatest and best-constructed geranium-houses anywhere to be found: it is span-roofed, and, by a very simple process, the stage can be raised to within a few inches of the glass; a thing very requisite in damp winters like the last. Mr. Maddison is by far the best grower of geraniums in Belgium; all the others keeping them so close, that they are drawn up quite slender, and lose their bottom leaves, which renders the plants unsightly. I found Mr. Maddison very intelligent and obliging, and willing to render me every assistance which lay in his power. M. A. van de Woestyne-d'Hane, near the last-mentioned place, has a good garden, with several forcing-pits after the Dutch fashion. Here there were some good crops of kidneybeans, peas, carrots, &c. &c. There were also some good specimens of old stove plants, and a very large orange-house, well stocked with fine healthy trees. The kitchen-garden, like most others in Belgium, is badly kept, there being nothing like order or regularity observed, either in the cropping of it or anything else. The park and pleasure-grounds had a very naked appearance; not an evergreen of any description was to be seen, and large tufts of long withered grass were scattered all over the lawn, or rather over what was meant for such. M. van der Meersch, an amateur cultivator, has a very neat small place, containing two green-houses and one camellia-house; and he has certainly the most select collection of plants I have as yet met with. His houses are small, but the plants are in very fine condition. His collections of pæonies and roses are large, and he has many good herbaceous and alpine plants in pots, which he preserves through the winter in a shed. He informed me that he seldom loses a plant. I was much gratified with the whole management of this villa, as every thing seemed to be kept there in its proper place. When M. van der Meersch turns his plants out in summer, instead of placing them on the ground, as is generally the case, he has low stages erected in a shady situation, on which he places the pots, and thus prevents the worms from entering them. This is certainly a good plan, where there are only a few plants; but in extensive collections the expense of erecting these stages would be so great, that few nurserymen would be able to support it. There is here a botanic garden, which, from its appearance, must be a very ancient establishment; but at present it is in a very neglected state. The plants are in a miserable state; for the curator, being a very old and infirm man, not able to attend to the management himself, has intrusted it to men that know little, and often care less, whether the place is in good keeping or not, and the consequences before mentioned naturally follow.

There are a great many market-gardens in the immediate neighbourhood of Ghent; but these are generally in very bad order, displaying neither regularity nor taste in keeping. The vegetables produced are, however, excellent, and very cheap. I particularly admired the fine quality of the Brussels sprouts, which are here to be found in quantities scarcely credible.

Having given you a short account of the different places I had an opportunity of seeing, I shall now endeavour to describe the *Fête Jubilaire,* which took place on the 15th of March, and lasted during the five following days, in the great hall of the university; a place admirably adapted for the purpose, having a large glass dome on the top, which admits plenty of light. This hall being well heated by means of stoves, the plants were preserved in fine condition during the whole time. The plants were arriving from all quarters for several days previous to the 15th: on that day the judges decided to whom prizes should be awarded; after which the plants were all placed on stages erected for the purpose, and, being previously numbered, and catalogues printed of them, every person had an opportunity of knowing the names of the plants, and to whom they belonged. After the arrangement was completed, the public were admitted gratis for four days; a thing worthy of imitation by other societies. The plants most admired were, Telòpea speciosíssima, Enkiánthus quinqueflòrus, Clív*ea* nóbilis, Oncídium papílio and lùridum, Bráss*ia* caudàta, Eriostèmon *b*uxifòlius, and Dorýanthes excélsa, 16 ft. high, in full flower. All these, and many others, were from the collection of M. Mechelynck of Ghent, who received two gold and one silver medal, which his collection richly deserved. The collection of Sir Henry Oaks, Bart., of Tournay *, deserves particular notice; and the fine condition in which the plants arrived, from such a distance, does him great credit: the gold medal awarded to strangers was given to him. The collection of M. Reynders of Brussels was very little inferior to the last, but yet so much so as to lose the medal. There were several other medals distributed, amounting in all to fourteen. The distribution was conducted with great ceremony, in a sort of amphitheatre in the university; the admission was by cards, upwards of four thousand of which were distributed by members to their friends. The company loudly cheered the different gentlemen, as they stepped forward to receive their medals from the president of the society. Altogether, it was certainly the finest exhibition I have ever seen; and, taking into consideration the season of the year, and the distance that many of the plants were brought, the fine style in which they were forced surpasses any thing I have ever witnessed in England. The show of the London Horticultural Society, of May 10., was much the best that had ever been exhibited there, but still it fell far short of that which I witnessed on the 15th of March at Ghent. There is no country in the world could show against England, if it were not for that aristocratic pride which divides society into two classes, and which does not exist on the Continent. At Ghent it was difficult to distinguish the one class from the other; all seemed of one mind, and, at least for the time, on the same level. Having finished my business I departed on the 18th of March, for Antwerp, highly gratified with the reception I had met with from the inhabitants, during the eight days that I remained in Ghent.

(*To be continued.*)

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* According to the *Fête Jubilaire* (reviewed p. 319.), this gentleman sent no fewer than 143 specimens. — *Cond.*

Art. II. *Short Notices of the Gardens at Ravensworth Castle, the Seat of Lord Ravensworth; and of Gibside, the Seat of —— Bowes, Esq. M.P. for South Durham.* By G. W.

Ravensworth Castle is pleasantly situated in the middle of an extensive park, which is very much beautified by the diversity of its surface, and the excellence of its woods. It slopes to the east; and presents a noble appearance when seen from the towns of Newcastle and Gateshead, each distant about three miles. Lord Ravensworth, the noble proprietor, when not attending his parliamentary duties, resides constantly at the castle; which is a splendid modern building, enriched by a magnificent conservatory attached to the west end. This conservatory is entered from the library, by a door, which, before it is opened, resembles a bookcase; and, to strangers, it is an agreeable surprise to be ushered from a library suddenly into the midst of odoriferous plants, where they may contemplate the works of nature developing themselves in numerous forms. The interior of the conservatory comprises two square borders, containing many excellent exotics; and two fine specimens of the *A*càcia decúrrens, planted at each end, which meet in the centre of the roof. An extensive terrace bounds the south front. The disposition of the flower-beds on the lawn, the broad gravel walk extending the entire length of the castle, and the borders for half-hardy shrubs and climbers, are all in good taste. The old castle, now in ruins, with its "ivy-mantled towers," seen from the terrace, presents a singular contrast to its more modern neighbour.

The garden is approached by numerous serpentine walks, bordered with the finer kinds of shrubs. One walk leads past a pond inhabited by several species of foreign fowls, and having an island and rustic domicile in the middle of it. The garden is extensive; but the soil, a tenacious clay, is not well suited for the growth of vegetables. The forcing department consists of numerous pine-stoves, peach-houses, &c.; with a large double-staged green-house, one for pelargoniums [there is a pelargonium of merit called Lord Ravensworth], the other for heaths. The door is in the front; opposite to which there are two, and, at the ends of the stages, several, very fine plants of the different kinds of Fúchs*ia*, fixed to posts. Nothing can equal the beauty and splendour of these plants when they are in full bloom.

In the melon ground there is a pit exclusively used for fruiting the queen pine, by a method not yet generally adopted in large establishments; but which is said to be very advantageous, as that kind fruits much sooner than any other. Ravensworth has long been celebrated for superior pines, the collection being one of the largest in the north of England.

The present intelligent gardener, Mr. Bell, succeeded Mr. Richardson, the noted pine-grower, three years ago; and deserves great credit for the superior skill evinced in every branch connected with his business. His house is contiguous to the garden, and is in unison with the magnitude of the establishment.

Gibside, the Seat of —— Bowes, Esq. M.P. for South Durham, was, from the death of the late Earl of Strathmore, until the present proprietor became of age, almost totally neglected. Few places, for good keeping, could equal Gibside during the lifetime of the late earl. About thirty men were employed, all the summer season, in mowing the lawns in the pleasure-grounds and the numerous green drives through the woods. It appears, by the improvements made since the present proprietor has attained his majority, that the place will probably, in a short time, resume its former splendour.

The garden, which is in the form of a square, comprises four acres, divided and encircled by broad grass walks. A range of old dilapidated hot-houses, that, at one time, occupied all the north wall, are giving place, by piecemeal, to a range of metallic houses on the curvilinear plan, to be heated by hot water: these, when finished, will have a grand appearance. A pond at one corner of the garden, full of aquatic plants, merits attention, as this is rather a remarkable feature in a kitchen-garden. The winding approach, along the brink of a wooded glen, passes the banqueting-house, which has a geometrical pond in front. On the opposite side, but nearer to the mansion, a magnificent Ionic column, 120 ft. high, crowned with a statue of Liberty, suddenly strikes the eye. The mansion stands upon a terrace. The ground on the west side slopes gradually into an extensive meadow, the river Derwent forming the boundary. A winding terrace-walk leads to a large architectural green-house, and thence to the much-admired chapel. The scenery is bold, grand, and truly picturesque; and, for varied and extensive prospects, can seldom be equalled, more especially the distant views to the west, over the Derwent. The park is four miles in circumference; and is well clothed with fine old timber, interspersed with a good collection of yews by the sides of the green drive, which are pleasant to look at in winter, when all else appears bleak. Gibside, taken as a whole, is a first-rate residence, being replete with natural beauty, heightened by art.

Staffordshire, Jan. 3. 1834.

Our correspondent has just (July) obtained a place as head gardener in the West of Scotland; whence, we trust, he will frequently let us hear from him. We most ardently desire, that similar good fortune may speedily attend our other young friend and correspondent, Scientiæ et Justitiæ Amator. — *Cond.*

Art. III. *On the Importance, to Gardeners, of visiting Gardens; and on the Restrictions, in some Cases, thrown in the Way of their doing so.* By Scientiæ et Justitiæ Amator.

When I consider the circumstances in which I was lately placed, living in a country where gentlemen's seats so much abound, I fear you will think me negligent in not having sent, according to your request, a description of some of the gardens in the neighbourhood. Various reasons have as yet deterred me from commencing such an undertaking. I perceive that when you, or any of your correspondents, give a description of a garden, you generally accompany it with a notice of the site and architectural style of the mansion, and the manner in which the park is laid out, followed up by remarks upon the adjacent scenery; showing how all coincide, or fall short, in forming a harmonious whole: subjects all very interesting and instructive, as tending to give us, working men, some knowledge of the leading principles of architecture and landscape-gardening, but subjects which I do not feel qualified to discuss. Another reason is, the great difficulty of giving an impartial account of a number of gardens, without wounding the feelings of some worthy individual; who, although well versed in the principles of his art, yet, from the circumstances in which he is placed, finds it impossible to obtain that success, or keep up that respectable appearance, which he would desire, and which, perhaps, he had formerly done in other places of which he had the management. Some, convinced of this, when giving a description of a place, chiefly confine their observations to what they consider denotes superiority of management; and the consequence is, that we are frequently disappointed, when visiting places of which we have read, merely because an impartial account of them has not been given. Others, when they see a place badly kept, are too apt to impute it to the slovenly habits of the gardener; while, in the generality of instances, it proceeds from the restrictions put upon him by his employer.

All gardeners must agree as to the importance of visiting as many gardens as possible. The advantages to be derived from this practice by the gardener, and, consequently, by his employer, are so apparent, that many gentlemen not merely allow their gardeners the necessary time, but frequently defray the whole of their expenses; and the only thing to excite our surprise is, that any should be so blind to their own interests as to oppose it, or be actuated by such an apparent selfishness as to deprive visiting gardeners of the privilege of looking through their premises. In many places, visiting gardeners, especially if young men, are shown only part (and, often, the most attractive part) of the grounds; and, even then, it frequently happens that the terror depicted upon the countenance of your guide, lest you should be seen by any of the family, the skulking-holes in which, at times, you must conceal yourself, to avoid observation, and the anxious manner in which you are hurried along, render it impossible to enjoy that satisfaction which a calm survey might have afforded. If such things are the effect of strict orders, the resident gardener, however painful it may be to his feelings, ought to comply with them, and admit no visiters at all; and, this being made known, other gardeners would not be disappointed. If not the effect of strict orders, the gardener, or the person who conducts you, acts in a manner calculated to render himself suspected of some nefarious design; for, although no one, in such cases, would desire to obtrude on any of the family, the resorting to unmanly methods of avoiding them is enough to raise suspicions in their minds, fear and alarm being concomitants of guilt. It would be pleasant to observe that none of these obstacles could be traced to the mere capricious humour of gardeners; but, from what has fallen under my observation, I cannot exonerate them of such a charge. As a proof of this, I may mention, that, on taking a tour along the coast of Fife, with a valued correspondent of this Magazine, we came to D——; and, after calling upon the head-gardener, who lives at a considerable distance from the principal garden, and obtaining his permission to look over the grounds, we proceeded to them. On our arrival, after being shown through the kitchen-garden (the greater part of which was sown with grass), the young man who conducted us declared that he could show us no more without permission of Mr. ——, the under-gardener. This Mr. —— being from home, we waited a long time for his return; when, on our stating where we came from, he ordered the same young man to show us every thing. Now, the least reflection will show the absurdity of such a practice; for, however far a person might travel to see these gardens, his journey would be labour in vain if this Mr. —— were from home when he arrived. It was in 1830 that I visited this place; and I know not whether the practice be still persevered in.

As another drawback to the young gardener, it is now becoming fashionable, when new places of any celebrity are forming, to admit no visiters until all is finished. When I read an account of a celebrated establishment near London, I never imagined that I should frequently pass one of the boundary walls of the garden, and yet know less of what was doing within than when I was several hundred miles distant. Although I have not had the best opportunities for judging, I have long felt convinced that much is to be gained from visiting a new place while the operations are proceeding; and, accordingly, being in the neighbourhood of Derby in the month of August, I called at an extensive new place, where, I had been informed, every thing done and doing was upon the most approved and scientific principles; but imagine my disappointment, when the gardener politely expressed his regret that I had come so far for nothing, as he had received orders to show no one through the grounds until all was finished. The unfitness of gardeners to lay out a small piece of ground is sometimes alluded to, perhaps too justly, by those who seem to feel a pleasure in descanting upon our ignorance, and depreciating the abilities which, as a body, we really do possess; but, if this exclusive system once become generally acted upon, how can we ever improve in this respect? How can those who never were employed in the formation of a new place be possessed of clear ideas on the subject, or be qualified for conducting operations in a proper manner? Whatever may be urged in defence of this exclusive system, it is manifestly prejudicial to the improvement of the young gardener. It is little satisfaction to tell him, that, some years afterwards, he may enjoy the privilege of walking over the grounds. His curiosity may be then satisfied, and his admiration excited; but he will learn no more of the art of laying out a garden, than a person desirous of becoming a lapidary would acquire of that art by merely beholding a finely cut and highly polished pebble. Great as is the improvement we may derive from the descriptions of gardens with which you favour us, it would be greater still if we could add our own personal examination after reading the description; and, for my part, I would rather want the description altogether, than receive the mortifying intelligence, at the conclusion, that the place is not allowed to be generally seen.

One reason for excluding the public in general from visiting such places may be, that they are not sufficiently attentive to the old rule, "Look, but handle not; and, far less, take not:" for, however this may apply to the public generally, inattention to the duties of integrity can seldom, if ever, be laid to the charge of the visiting gardener: nay, so well known is our strict adherence to propriety in this respect, that, in places where only a part of the public is admitted after obtaining an order, &c., the visiting gardener at once finds admittance. As a pleasant proof of this, I might refer to Alton Towers, the romantic seat of the Earl of Shrewsbury: a place from which all strangers, except those travelling with a livery-servant and their own carriage, are excluded; but to which gardeners are freely admitted. This extraordinary place is one which every young man who has it in his power ought to visit; and one where he will scarcely be more delighted with the magical fairyland stretched out before him, than with the pleasing manners of Mr. Miller; who, notwithstanding his unquestionable abilities, does not disdain to treat with the greatest attention *even* a visiting journeyman gardener.

Art. IV. *An Experiment made with a View to determine the Efficacy of Oxalic Acid in stimulating dormant Vegetable Life.* By William Hamilton, Esq. M.D.

I took, on the 5th of May, four grains of Victoria wheat, and put two to soak in 2 oz. of soft water, acidulated with two drops of a saturated solution of oxalic acid; while the other two were put into rain water. At thirty minutes past one in the afternoon of the 6th of May, after having been macerated for twenty-six hours, I took out one grain from each, and, washing that which had been in the acidulated water from any adhering acid, I planted both in separate pots; and, at noon on the following day, after macerating for forty-eight hours and a half, I took the remaining grains, and sowed them, without washing that which had been soaked in the acidulated water. On the 10th of May, the first-sown seed, which had been soaked in the acidulated water, first appeared above ground, at 8 a. m., and at the same hour on the succeeding day had made a growth of four eighths of an inch; while the grain soaked in rain water, and sown at the same time with it, was still invisible. At length, on the 12th, at 8 a. m., by which time the leaf of the former was fully expanded, and its height was 1⅛ in., the other appeared above ground, and, almost simultaneously with it, the second seed taken out of the acidulated water, and planted without washing. On the 14th, the plant which first appeared was, at 8 a. m., 2⅝ in., while that sown at the same time with it had its leaf just beginning to expand, and its height was only 1 in. The fourth seed (the second of those soaked in rain water) had not, and has not yet, appeared. At this moment, 3 p. m., May 20., the first of those soaked in oxalated water measures 6 in. from the ground to the top of the longest leaf (two leaves being fully developed); that soaked in rain water 3¼ in.; and that which, having been soaked in the oxalated water, was sown without washing, 2 in. and a little more than six eighths. What their future progress will be, we have yet to learn. However imperfect and inconclusive these experiments may be, their notice may not be altogether useless, since they may serve to stimulate some better experimenter to take up the subject, and prosecute it more successfully.

Plymouth, May 20. 1834.

Various notices respecting the Victoria wheat, and some of them of very considerable importance, in an agricultural point of view, will be found in succeeding pages, under England and Scotland. — *Cond.*

ART. V. *On Live Moss as a Substitute for Potsherds, Cinders, and similar Matters, as Drainings for Pots.* By Mr. THOMAS PARKINS.

IN p. 134. are recorded some experiments on draining pots with coal cinders, accompanied by some pleasing and useful remarks. The most common method of draining pots is, it is well known, by using broken pieces of pot, or potsherds; which practice, there can be no doubt, became general from the circumstance of such materials being always at hand. It is generally difficult to root out long-established practices, and substitute new ones: I, however, have been trying if "living matter" would not answer for draining pots; and the success which has attended my experiments enables me to recommend the practice strongly. In the autumn of 1838, I received some carnation layers, which had been taken up the day before, and I potted them in the usual way. About a month after this, I received another set of layers, which had been brought nearly 200 miles across the country, and which, consequently, had been out of the ground some time. The pots in which these last were potted were drained with live moss (*Sphágnum L.*). On turning the plants out of the pots into the border, this spring, I found the latter much superior to the former, being more healthy and stronger plants; which I attribute entirely to moss being used as drainage, instead of pieces of broken pots. About the same time I potted some fine suckers, using moss for drainage; and at their removal, in March, I found the pots full of fine fresh roots. These results have induced me to adopt the plan almost universally this spring; and all the plants so potted present a most healthy and luxuriant appearance. Although moss may be considered powerfully absorbent of moisture, it will nevertheless permit a more easy percolation of fluid than any such compact material as a piece of broken pot. But this is not the only advantage gained by its use. For rapidly and luxuriantly growing plants it is surely of some consequence to be able to transfer them from one pot to another without injuring the roots, as is unavoidably the case when pieces of broken pots are used. Moss, however, not only affords drainage, but, by its slow decomposition, a lasting, and perhaps rich source of food to the plants growing in it; consequently, when the proper time arrives for the plants to be repotted or transplanted to the flower-border, it will be unnecessary to remove the moss, which will not only save time, which is often wasted in picking out the broken pieces of pot, but will prevent any danger of injuring the roots.

Cannon Hall, near Barnesley, May 17. 1834.

Art. VI. *On the distinguishing Characters of Trees, considered with regard to Landscape-Gardening.* By Mr. T. Rutger.

Your correspondent, "A Landscape-Gardener," has well said, in your Magazine (IV. 475.), that, in planting, "the distinguishing character of trees should be well studied." Indeed, without this, whatever a man's pretensions may be to landscape-gardening, his works will present a thousand defects to the eye of the connoisseur, who expects in them harmony of design and striking effects.

In order to simplify and assist the young and inexperienced in this department of the art of gardening, would not a kind of classification of the foliage of trees and shrubs be of service, to point out to him the proportionate value of each, according to its situation, in ornamental scenery? The same question may also be asked with regard to the ramifications of trees; some of which, when in a state of maturity, and in their decline, are far more picturesque than others. Among our deciduous trees, of English growth, the "monarch of the wood," the oak, may, I think, claim the precedence, both for its foliage and ramifications; and, perhaps, the elm may be considered the next in which both are combined, though in a less degree of pictorial beauty. The Spanish or sweet chestnut claims high regard with respect to its foliage; whilst the lime, with its pendulous branches, forms a beautiful cone of lively green from the ground to its summit. The horsechestnut, scattered here and there among other trees, produces a good effect, particularly when in bloom: as a lawn plant, it is too stiff and lumpish in its appearance, and should be but sparingly introduced; whilst the planes, both occidental and oriental, are valuable for the lawn, and equally so in masses mixed with other trees. The ash may, I think, be considered as possessing few claims for introduction into ornamental scenery, and therefore should be the less employed by the landscape-gardener; whilst the beech, in many instances, may be planted with advantage. The effects of the Lombardy poplar are so judiciously shadowed forth in this Magazine, by your correspondent Mr. J. Thompson (I. 16.), in an article well worth the attention of those who may wish to make use of this poplar advantageously, that I need not enlarge upon it; and the weeping willow, which is made the almost constant companion of the river, lake, and waterfall, will always be admired in proportion to its adaptation for the place assigned to it.

Among the resinous tribe, the Scotch pine and the cedar of Lebanon may be taken into primary account with regard to their ramifications; and the latter in its foliage is seldom if ever surpassed, particularly when it is planted in a soil congenial to its growth. In such cases it is seen towering up to the height of sixty or seventy feet, and stands unrivalled upon a lawn, or in any situation favourable for allowing it to feather itself down to the ground. The silver fir has a similar claim to the notice of the planter, as has also the spruce; and the latter may be planted occasionally as skirtings on the lawn side of plantations or shrubberies, with more freedom than the former, on account of the diversified appearance of its fronds, which on different trees is often remarkable, and produces a pleasing effect. In speaking of the larch, I think it may be recommended to be planted in groups among trees of various kinds, but more particularly among large masses of the other kinds of fir, where, by its enlivening green, particularly in the spring, it will greatly relieve the sombre appearance natural to that tribe. The Weymouth pine, much as it may, perhaps, be admired by some, is generally of too short a duration to be recommended as worthy of much consideration by landscape-gardeners; and, even where it lives long, it does not retain enough of beauty to render it desirable.

I might in this way proceed to give hasty notices of many other kinds of trees, and also of the vast variety of shrubs, both deciduous and evergreen, which are now cultivated for the sake of ornament; but I feel I am treading upon hallowed ground. I am even doubtful if my lucubrations on the subject would be possessed of a sufficient degree of merit to render them serviceable; and it is well if I have not already committed myself. I therefore decline pursuing the subject any farther, hoping that others of acknowledged taste and judgment may feel inclined to give it their attention; and that, through the medium of your Magazine, we may see the result of their considerations upon it.

The specific object which I have in view is, to give to the inexperienced young gardener a kind of outline whereby he may proceed upon safe ground in disposing of trees and shrubs according to their relative value, so as to produce the best effects that local circumstances may admit of, either for the park or pleasure-ground. To elucidate the subject, skeleton plans might be given, and numbered with references descriptive of the tree or shrub to be planted, and if singly or in masses; to which might be added remarks upon the lights and shades that would be produced by the different tints, projections, indentations, &c., in a lengthened plantation, planted either in partial masses of one sort of tree, or otherwise. Distances might also be taken into the account, showing the effect that would be produced by various kinds of trees and shrubs from different points of sight. The ingenious designer might first sketch the outline, in his plan, of the buildings and water which may be supposed to exist, together with the bridges, temples, ruins, lodges, &c., in contemplation to be erected. Hills, also, and undulating ground might be sketched in, agreeably to his fancy; as well as other things that might be suggested by way of usefulness or embellishment.

Perhaps some of your readers may think that enough has already been written upon this subject to lead any person of mind sufficiently into it. That there has been a great deal written, and well written too, on landscape-gardening, cannot be doubted; but I do doubt if there are many young men among your readers who can have access to such publications; and, with the exception of what is given in your *Encyclopædia of Gardening*, and the papers that have occasionally appeared in your Magazine, numbers of them may not have read a page upon the subject. Besides, this, like most other subjects, is capable of farther developement, and is well calculated to call into play the slumbering talents of many who may not now be conscious of the powers they possess. I should be really glad to see this subject entered into fully by some of your intelligent correspondents. It opens a wide field for the exercise and display of talent; and, as it may be considered the highest branch in the art of gardening, it would reflect credit upon those who might favour you with designs and the necessary accompaniments of references and explanations, with such observations as they might think proper to offer thereon. A farther progress in the art would be thus accelerated, while the mind would be employed in one of the most delightful exercises that nature has afforded to man.

Permit me to add, that your Magazine, being a periodical, is well adapted for the reception of articles of merit in this interesting branch of gardening; as, by occasional essays, that perpetual stimulus will be kept up which is necessary to the perfection of every art; and notices of its progress must be highly beneficial to all those who need instruction.

Shortgrove, Essex, Jan. 1834. T. RUTGER.

ART. VII. *Hints on Landscape-Gardening, on the Use of Botanical Rarities in Picturesque Scenery, and on the Size and Arrangement of Flower-Gardens.* By CALYCANTHUS.

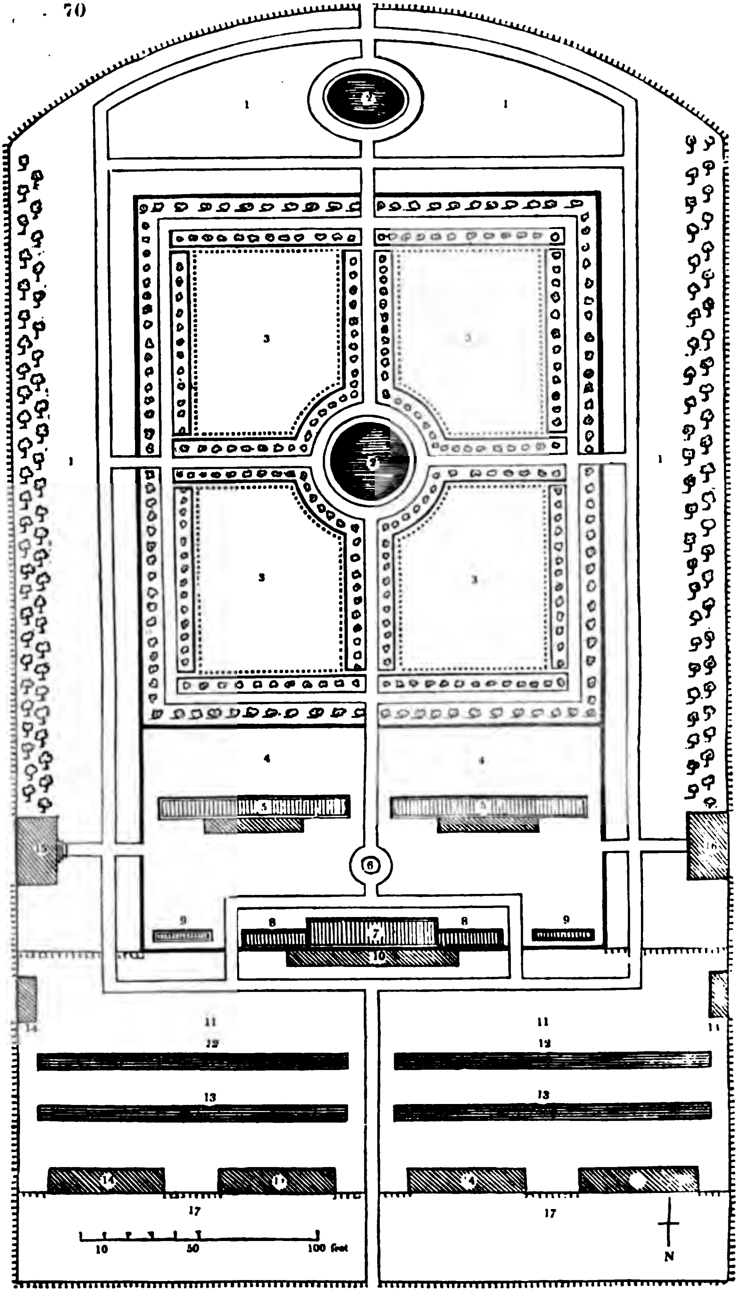
THE observations of the Chevalier Sckell (p. 197.), I consider most useful to young gardeners, by leading them to consider theoretically some of those points which they may have hitherto known only in practice. The Chevalier Sckell seems to think that the great addition made since the commencement of the present century to our stock of plants, is less advantageous to landscape-gardening than to botany. It certainly appears to me, that the landscape-gardener and the botanist have very opposite views, which it is not always easy to reconcile: the former looks upon plants as mere materials of picturesque beauty in the garden; while the latter is too apt to look upon his garden solely as a receptacle for botanical rarities. I have seldom seen these opposite interests so well combined as at Cobham Hall, in Kent. I cannot help thinking that, where picturesque beauty is the principal object, the size of the flower-garden is often extended much beyond the economical point; that is to say, the effect produced is not in proportion to the expense and trouble incurred. A much better effect might frequently be obtained, if one half of the ground occupied by flowers were to be turfed, or judiciously planted with shrubs, and this in small gardens as well as in large. The beauty of a garden, like that of a picture, does not depend upon magnitude, but upon proportion and keeping; and the human eye is so constituted that no beauty can please, unless due attention is paid to what is, with great propriety, called repose. In the parks and shrubberies of many of the nobility and gentry of this country, we find that, if the size of the flower-garden be more than very moderate, it is divided into a series of pictures, by means of the judicious disposition of shrubs or ornamental trees. It seems to me that a flower-garden, considered only with reference to beauty, is too large when the flowers produce effect only as masses of colour; when, for instance, the common marigold and Calliópsis bícolor are considered as alike producing a tint of yellow. There is an elegance of form and growth in many flowers, quite as pleasing as their colour, but which becomes lost, or unavailable to effect, when the whole garden is too extensive.

June 16. 1834.

Art. VIII. *A Series of Designs for laying out Kitchen-Gardens.* By Mr. T. Rutger. Design 3., *Containing an Acre and a Half within the Walls, and about the same Quantity in the Slips.*

The plan (*fig.* 70.) is intended to enclose within the walls, including the forcing department, about an acre and a half, and the slips will add nearly an acre and a half more. The slips may easily be curtailed, if thought too large; but, by the width shown on the plan, room is afforded for standard apple trees, &c., as particularised in the references. Instead of espaliers, dwarf-trained fruit trees are here introduced by the side of the walks; and, if this be not approved, gooseberry and currant trees may take their places.

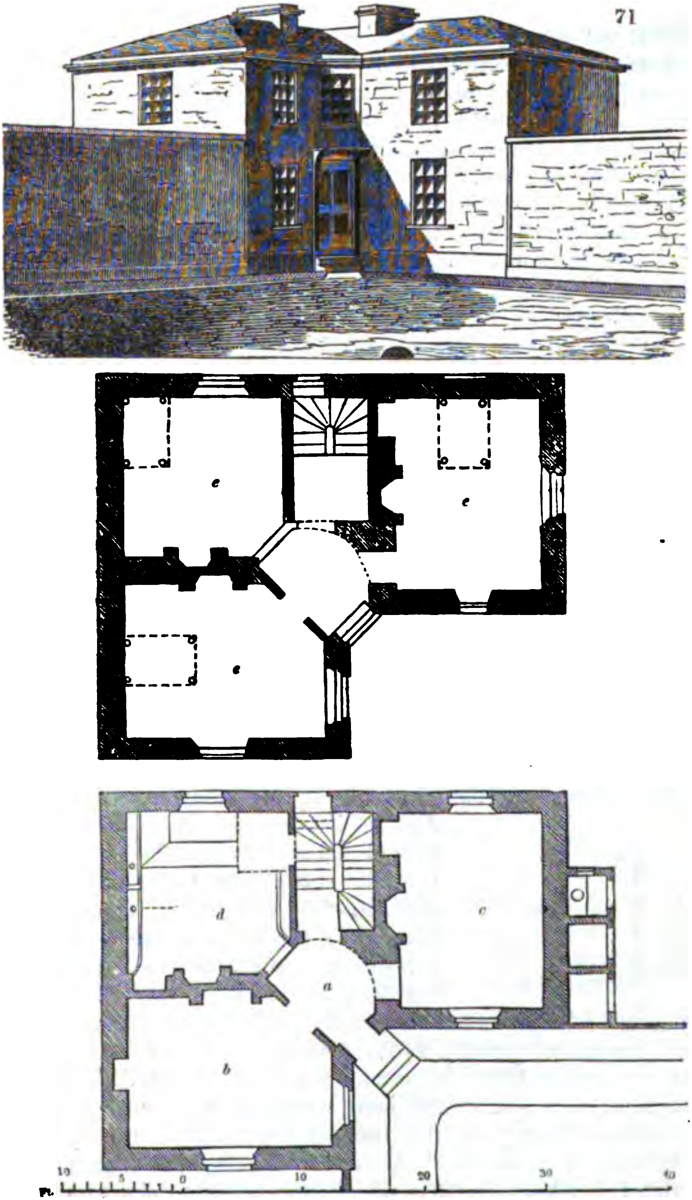
70



1. Slips, with standard apples, pears, cherries, filberts, &c., at the sides. 2. Ponds. 3. Culinary department, bordered with dwarf apple trees or gooseberry bushes, &c. 4. Forcing department 5. Vineries, fig-house, and for forcing strawberries, &c. 6. Water-basin, or pump. 7. Pine-stove. 8. Peach-houses. 9. Pits. 10. Back-shed. 11. Frame ground. 12. Cucumber ridge, early carrots, or potatoes under hoops, &c. 13. Melon or cucumber ranges. 14. Mush-room-sheds, tool-house; sheds for wintering vegetables, &c. 15. Gardener's house. 16. Fruit and onion room, with lodging-room for under-gardener, and seed-room over. 17. Department for compost, mixing and turning dung, &c.

Art. IX. *Design for a Gardener's House, for the North-West Angle of a walled Kitchen-Garden.* By Mr. Robertson.

71

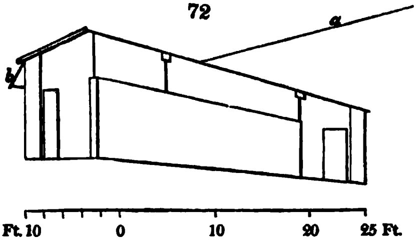


The principal floor contains: — *a*, Entrance lobby; *b*, kitchen; *c*, parlour; and *d*, office and library. There are cellars below, three bedrooms (*e*) above, and the usual offices outside.

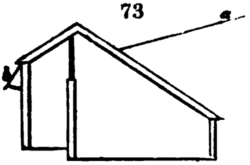
Art. X. *Considerations on the various Modes of constructing Forcing-Houses, relatively to the Degree of Heat to be obtained in them from the Sun's Rays.* By Mr. George M'Leish.

It is not my intention, while the mania for hot water is in such an unsettled state, to enter largely on the manner of supplying heat to the interior of hot-houses, either by flues or by pipes conveying steam or hot water; I shall confine myself at present to the transmission of heat from the solar rays through the medium of glass.

72



73



To begin with the pine-stove: gentlemen gardeners (that is, those who superintend their own gardens), and gardeners, and amateurs, have, no doubt, seen a variety of pine-stoves with the angle of their roofs varying from the flat roof of the pine-stoves at Kensington to the comparatively steep one of the celebrated Baldwin; and very possibly have, one time or other, found very good pines in most of them. They have, too, very probably, generally taken it for granted, that those in which they have seen the best pines must of course be the very best models which they could copy in houses to be built for their own cultivation of the pine, without once enquiring into the cause, or combination of causes, why the pines in the houses which they may have selected as models have excelled in either size or beauty. I herewith send you the end sections of two pine-stoves. *Fig.* 72. is the pine-stove of a gentleman with whom a particular friend of mine lives in the capacity of gardener; and it exemplifies the flat roof of the Kensington fruiting-house. *Fig.* 73. is one constructed after the manner of Baldwin's fruit-house or stove. I shall endeavour, as briefly as possible, to point out the advantages of the latter over the former. In both figures, *a* represents the sun's rays on December 21., in latitude 51°. In *fig.* 72., the angle of incidence becomes 58°, which, by Bouguer's table [see *Encyc. of Gard.*, § 2457. new edit.], transmits more than 888 rays out of 1000, the remainder being reflected. This house stands at an angle of 36° from south to east, consequently the sun shines directly on the roof at ten o'clock, the sun's altitude being then about 8° above the horizon, thus increasing the angle of incidence to 65°; which, according to the above-mentioned table, loses an additional 45 rays by refraction: for it is questionable whether the effect of the increased altitude of the sun at twelve o'clock may not be almost lost on account of the obliquity of the angle. The original purpose of this house was to grow pines and kidneybeans through the depth of winter, and strawberries from March till a supply could be obtained from the open ground. In *fig.* 73., the angle of incidence, on December 21., is 41°, which, according to the above table, admits nearly 966 rays; leaving a sensible balance of transmitted rays in favour of *fig.* 73.

Let us next consider these two houses with regard to their different capacities for retaining and radiating internal heat. *Fig.* 72. has a metallic roof, and is, therefore, a greater conductor of heat and cold than *fig.* 73., which is of wood. *Fig.* 72. has a flat surface, and is, in consequence, much more susceptible of cooling, during the absence of the solar rays, than *fig.* 73., which is comparatively steep. Of this consequence any person may convince himself, by placing an object of a cubical form in the open air during a frosty night, with one of its six sides in a horizontal position: the upper horizontal side will be covered with hoar-frost, while the four sides vertically exposed will be comparatively, if not absolutely, exempt from it. The cause is obvious: hot air takes an upward direction, and cold air the contrary, unless when acted on by some powerful horizontal force, as, for instance, wind. On this principle, therefore, the steeper the surface, the less favourable it becomes to radiation; and the more horizontal, the more favourable. *Fig.* 72. is wide, and is therefore less easily heated; and, from its construction, it cannot admit of being covered during severe weather. *Fig.* 73. is narrower, and therefore is more easily heated, and can readily be covered during severe weather; which gives it an additional advantage over *fig.* 72. "Oh!" but some may say, "only apply a little more fuel, and that obviates all your objections." But I say, without hesitation, this can never supply the deficiency; for the heat that is given out by a smoke-flue, or hot water or steam pipe, as these are commonly constructed, is not only deprived of its hydrogen, which is so favourable to vegetation, but it is also, in the case of a smoke-flue, so loaded with sulphureous effluvia, that nothing subjected to its influence can thrive; and many tender plants will actually dwindle away. Each of these houses may be very good in its place: Baldwin's both to grow and fruit pines; and the other to fill with plants ready to fruit about the middle of February or the beginning of March, to let them remain in until the fruit are all cut, and then to let the house be unemployed till the sun again commences his course towards the northern hemisphere. To attempt, however, to grow kidneybeans in such houses, with the idea of reaping a full crop (only see the method of giving air, *b*), would be like the fruitless labours of Sisyphus, who was condemned to roll up hill a large stone, which ceaselessly frustrated his efforts by rolling back again.

In short, the great objects in the formation of forcing structures are, providing the capability of preserving an abundance of heat, whether derived from the sun externally, or from the ignition of fuel through the kinds of internal apparatus already mentioned; the means of facilitating its escape at the highest part of the house; and plenty of transparent surface, with the power, however, of rendering it partially or absolutely opaque at pleasure. If these conveniences are provided for the gardener, it is his own fault if his plants do not succeed; and if they do not, as it must be through his ignorance or injudicious treatment of them, on him should rest the blame.

I have offered these observations from an honest desire of palliating an evil which I am unable to remove; namely, that springing from the misunderstanding which too frequently arises between gentlemen and their gardeners, from the former requiring and demanding of the latter those results which (from the means afforded) it is morally impossible for them to produce.

Ville parmi les Collines, April, 1834.

Art. XI. *Brief Observations on preparing the Ground for Planting, on Pruning, and on the Cultivation of Trees for Timber.* By Mr. George Burton.

It has been contended by some, that a well-prepared soil and good culture occasion a too hasty growth, and, consequently, the deterioration, of timber; and, by others, that the fibre of the wood is strengthened by a vigorous growth, and that the best culture will, with a suitable soil, give the best timber. Now, neither of these opinions is entirely correct; for, when the ultimate bulk of a tree is compared with that produced in the first twenty years of its growth, it is of little consequence, perhaps, to the converter [the manufacturer of the rude tree into forms fit for the use of the carpenter, &c.], if it is sound, whether it grew quickly or slowly, nor will that be enquired after; and the best culture does not affect the growth of the plant, perhaps, beyond that period, as the cultivated ground is then filled with roots, and the plant must thenceforth depend on the substratum for its support. I speak here particularly of the oak. But there are two points which make it desirable that a plantation should grow rapidly in its infant state: the first is, the satisfaction which the proprietor derives from seeing it thrive, as also from drawing a quicker return of profit by the earlier cutting down of the nurses; the second is of still greater importance, as a plant growing freely for the first twenty years is sure to give a greater length of stem than one that is stunted; as we find that those subjects, both in the animal and vegetable creation, generally arrive at the greatest perfection, which are well supplied with nourishment in their early state. Although timber may be harder and closer in the grain by a slow growth, and well suited for many purposes in common life; yet it is only on soils and situations that are favourable to free growth, that we can obtain trees of sufficiently large dimensions to be suitable for the various purposes of civil and naval architecture.

In every case, then, for the rearing of the best sorts of deciduous forest trees, a preparation of the soil, by trenching, is to be preferred where practicable; and the liberal use of the hoe, and even shallow digging in the winter, for three or four years after planting, will much benefit the plants: at the end of which period, if the plantation has gone on well, these may be discontinued, as the trees will then nearly meet. It is to be understood that the plants are to be put in about 4 ft. apart, and not less than 3 ft., according to soil and situation.

Pruning will next become necessary: but here, as in the case of preparation of the soil, men are divided in their opinions, some recommending one mode, and some another; but all concurring in this, that the object aimed at is, to obtain tall, clean, and sound timber; and, certainly, no object is of greater importance to the interests of this kingdom.

The barbarous practice of cutting to within 1 ft., or less, of the bole, leaving stumps or snags, is now nearly exploded in theory; yet it is grievous to see that it is still too commonly practised in most parts of the kingdom, to the no small injury of the timber: so difficult is it to get out of established habits, even when these are known to be pernicious. The present observations may, then, be limited to an enquiry as to the comparative merits of the close pruning and the foreshortening methods; or whether both may not be blended together in practice, according to circumstances, in order to obtain tall stems as free from knots and other defects as the case will admit of, in conjunction with the health of the plant and the object of prolonging its growth to the longest possible period.

It may be observed here, that no branch, from the size of the finger upwards, can be severed from the trunk without a proportionate injury being sustained; decay to where the branch first had its origin being the certain consequence of removal: consequently, the larger the branch is at the time of pruning, the greater will be the injury sustained by the timber. This may be verified by inspection of the growing subject, even when the wound has been healed over for a few years, by boring into the part with a small auger or large gimlet; or by the converter, when the saw is applied. But, if the branch or shoot be taken off in its infant state, and when not more than an inch in diameter, the injury will be less in proportion; and, in fact, a small speck only (which is but of trifling consequence) will appear in the timber.

If a purpose cannot be obtained without some sacrifice, it is wise and prudent to adopt that plan which will cause the least: therefore, at the age of three or four years after planting, let a few of the largest branches be cut off close, and also any that may have become competitors of the leading shoot; being careful, however, not to remove too many in one season, but to leave a sufficiency to keep the plant in vigour, and to carry it forward with strength of stem in proportion to its height; for, unless a sufficiency of branches be left, this necessary end will not be obtained. This process ought to be performed annually; or, at most, every two years, when the shoots to be removed will seldom exceed an inch in diameter. The best time for this operation is in the spring, before the flow of the sap commences. It will not unfrequently happen that a strong shoot will present itself, which it may not be prudent immediately to displace, as it would leave the plant too naked in that part. In such case, have recourse to foreshortening, taking off a third or a half down to a leader. This will check its luxuriance; and it may so remain for a year or two, when, the plant having formed more branches upward, it may then be cut off close. Thus proceed by degrees, as the tree gains height, until it reaches a point where, from soil and situation, it ceases to advance: pruning is then no longer necessary; the head will form, and the tree will go on enlarging in girth so long as health and vigour continue.

In the foreshortening method of pruning, nature is partly left to do her own work; as the supporters of this system take it for granted that, when a branch is retrenched, it will gradually decline in vigour, and at last die and fall off, without any assistance of ours: but we are not yet told at what period we may expect this to take place. Until this is done, we proceed upon uncertain data; and, so long as the branch so foreshortened continues, so long must the defect of the presence of a knot remain; and, even at last, when decay takes place, some years may elapse before the remains fall off close to the stem; and even then the part has to be healed over, and a portion of decayed wood will still be left within the bole. The exclusion of light and air, by close planting, will do much to facilitate the end proposed by this plan; but, to maintain the plant in a proper state, it must have space sufficient, so as not to be forced up too hastily.

There are, however, many cases where foreshortening may be practised with great advantage, as in hedgerow timber, where it is desirable to keep the head within moderate bounds; also in woods, where the undergrowth is in request as cover for game; and in places where copsewood is of more than ordinary value; as, by due attention to this mode of pruning, the head of the tree may be kept conical, instead of flat, and an equal extent of surface be presented to the atmosphere for the benefit of the plant. The foreshortening method should also be practised in all cases where it is wished to curtail or retrench rambling branches.

These leading points kept in view, they will embrace most cases connected with the rearing of timber, so as to render it tall in the stem, and as sound and free from other defects as circumstances of soil and situation will admit; so that, by close pruning generally, and foreshortening occasionally, they may be so combined as to produce the most favourable results.

It may here be remarked, that the defect called wind-shakes, which is often imputed to soil, more frequently proceeds from trees being drawn up too weak when young, and afterwards suddenly exposed by the removal of all the underwood at once; which, from its being often permitted to stand uncut too long, increases the evil. The same defect is also produced, at a more advanced age, when part of a wood is cut down, by the sudden exposure of those which are left, to the effects of every blast. Another evil attends sudden exposure, from the cold acting on the sap-vessels and the sap, and preventing its propulsion or ascent, and, consequently, depriving part of the plant of the degree of nourishment which it had been accustomed to receive. Hence we see frequently dead-topped old trees, and stunted young ones, as also the evil of a profusion of small lateral branches breaking out from the trunk; which latter occurrence often arises, also, from injudicious and excessive pruning, which, as well as sudden exposure, ought to be guarded against, keeping in mind that prevention is better than cure. But, above all, as the principal cause of decay and rottenness in the stem is from injudicious lopping off of large branches, let that be avoided, except in cases where foreshortening or terminal pruning, for certain purposes, may be resorted to.

At the expiration of four years from the time of planting, if the plantation have prospered, and the plants be beginning to meet, it will be necessary to commence thinning: but this is shamefully neglected in too many places, often to the total ruin of the whole plantation. It is here taken for granted that the plants were put out not wider than 4 ft. nor less than 3 ft. asunder; that the nurses consist principally of larch, spruce fir, birch, and the Scotch pine, where the soil is light and the situation exposed; and in certain places, where soil and situation are suitable, and underwood is wanted as a cover for game, or for other valuable purposes, that the hazel has been freely planted: in general about three nurses to one principal will be a due proportion, probably the birch and larch may have taken the lead, and it may be proper to begin the thinning with them. No specific rule, however, can be given for this operation, as it will depend on the relative growth of the plants. The principals should always be kept clear, so that the branches of the nurses do not overhang or interfere with them. As it will frequently happen that the removal of a nurse plant might expose the principal too much, in such case let such branches of the former as encroach upon the latter be foreshortened, or cut in, for the present, so as to give sufficient light and air, to the end that the plant may not be drawn or forced up unduly, and may possess a proper strength of stem to resist the winds and maintain itself in vigour. It will not fail to strike the reader, that plants may be left closer in exposed situations than in sheltered ones; sudden exposure, at all times hurtful, should be sedulously guarded against: hence an annual, or, at most, a biennial thinning, ought not to be neglected, so that the plants may enjoy as nearly as possible a uniform temperature, by which they will be kept in a constantly growing state. This process being regularly carried on for fifteen or twenty years, the whole of the fir tribe will be removed, except on spots where, from the occasional failure of other plants, it may have been proper to retain them, or on the outsides of the plantation, where they may be left for shelter or for ornament.

Thus, with due attention to close pruning in the early stage, and judiciously combining with it the terminal or foreshortening system (seldom removing more than what one year's growth will make good), and foreshortening where necessary, keeping the heads of the principal plants clear, and taking care also that they do not suffer from the side branches of others, good timber, free from the common defects occasioned by injudicious management, may be expected, and will, in all cases where the plant has been suited to the soil, be the result.

In the coniferous trees, or fir tribe, various opinions have also been given on the required management in regard to pruning. The great defect in the timber of this class of trees is the knot, which can only be obviated by pruning. But this requires to be done with much discretion. Even when planted thick by nature's hand, it is many years before the under branches decay and fall off: and in some of the species, after the branch has ceased to live, it will remain for many years as a peg, before it drops clean off so that the wound may be healed over. [See in p. 293.] If planted at 4 ft. apart, and on suitable soil, in five or six years they will require the pruning-knife; and, as in the case of deciduous forest trees, care must be taken not to over-prune (which would injure the growth of the plant), never leaving less than three tiers of branches untouched, and in exposed sites four tiers may be left. If they are gone over every two years, it will not be necessary to take off more than two tiers of branches at a time; the best season for this operation is in the spring, some weeks before the sap is in motion: let it be done close and smooth, and continued until a sufficient length of stem is obtained. In thinning these plants, particularly in exposed situations, there is some danger, and it ought to be proceeded in with caution. These trees having thick tops, long stems, and being shallow-rooted, the wind acts upon them with great force; and when an opening is made, either by plants dying, or by being injudiciously thinned out, much damage is likely to ensue. To keep the tops free from intermingling, yet not so much so as to introduce a current of air, is the safest practice. By thus proceeding, each plant, as in the case of deciduous trees, will have the means of fully imbibing by its leaves, and perspiring away the crude part of the sap, to make room for a succession. Having guarded against the wind by moderate thinning, it becomes expedient also to attend to the outsides of the plantation, to prevent its inroads there, by leaving the outside plants unpruned; which will not only give warmth and security, but will present a better appearance, by concealing the naked stems within.

The leaves of trees seem destined by nature to perform two essential functions: first, strongly to inhale, during hot and dry weather, moisture from the atmosphere during the night, in order to repair the waste occasioned by the perspiration of the preceding day; and, secondly, to receive the juices propelled to them from the root, and, as secreting organs, to prepare and elaborate the sap so received, to fit it for the support and enlargement of all the woody parts of the plant. Hence every branch, according to its size, after appropriating to its own use what is necessary, sends down the residue to the stem and roots for their enlargement, as well as for the multiplication of the roots; which may be proved from the roots of every tree being in the ratio of its branches. Thus every part of the plant acts and reacts: the branches are augmented by the roots, and the roots by the branches.

Pontey and some others consider that the principal use of the leaves is to attract the sap upwards; and that tapering stems are occasioned by branches obstructing the ascent of the sap, and also applying it to their own use; thus preventing the enlargement of the stem upwards: so that, according to their ideas, if the lower branches are removed, a greater portion of sap will go to the enlargement of the stem above. The author of these observations believes the reverse to be the fact, and that the branch, according to its size and vigour, administers to, and increases, the size of the bole, below its insertion; and hence, from the uppermost to the lowest branch, the tree will be tapered, not because the sap is obstructed in its ascent, but because the bole is better fed below by the prepared sap from the branch or branches, which is constantly descending and contributing to its enlargement, like tributary streams pouring into a river: thus, by removing the lower branches, the stem becomes less taper, because a part of the supply of prepared sap is taken away, and a proportionate enlargement of the lower part of the bole is prevented.

ART. XII. *Notice of a remarkable Ash Tree at Kincairney, in Perthshire.* By Mr. A. GORRIE, F.H.S. C.S. &c.

THE ash is planted more for utility than ornament. Summer often commences before this tree leaves off its bare wintry appearance: it is among the last to unfold its foliage, and the first to drop its summer mantle. Like all other trees in the forest, the ash varies slightly in the direction of its branches and general outline; but, for the most part, its straight stem, smooth bark, and formal top cause it to be neglected by the landscape-gardener or painter: even the weeping ash, to men of refined taste, may appear rather indicating sameness. The Kincairney ash forms an exception to the general tame character of its brethren. It seems to have been actuated alternately by the genius of mirth and sadness: at one time its branches droop; at another, they assume an elevated direction. This seeming indecision of character has given the tree a most fantastic shape; and the bending feature is maintained throughout the tree, even in its largest boughs. That it will, when multiplied by engrafting, preserve this characteristic feature, I have no doubt, as even its young shoots seem inclined to bend, without being particularly nice as to which direction they may take. I have directed the attention of Messrs. Dickson and Turnbull, nurserymen, Perth, to this tree; and I trust that it may, through them, soon be introduced among the picturesque trees of the lawn. It grows on the estate of Mungo Murray, Esq., of Kincairney, in the parish of Caputh, near Dunkeld, Perthshire. The tree seems to be very old; and, fortunately for its entire preservation, a superstitious opinion prevails among the lower orders, that any injury inflicted on it would be followed by some sad calamity to the unhallowed hand that might touch its sacred boughs. When the march of intellect shall have cleared away the mists of superstition, taste will become the protector of all such venerable objects as the Kincairney ash.

Annat Gardens, May 7. 1833.

The species and varieties of ash merit a much more extended adoption, in planting for ornament and the interest of variety, than they seem to have hitherto received. The pinnate leaves of all the kinds, except the *Fráxinus* heterophýlla, which is interesting in its simple leaves, are very pleasing; and those of a kind which, in some nurseries, is called *F.* chinénsis (though no kind of ash has been introduced from China) are elegant: and those who love to see variegated foliage must admire that of the silver-striped ash. The crumpled dark green leaves of the *F.* atrovìrens render this species striking. On the charms of the foliage of the common ash, and for numerous interesting considerations connected with a particular tree of this species, see *Mag. Nat. Hist.*, vi. 327. The great variety which obtains in the foliage of the various kinds of ash may be perceived by observing the distinctive epithets by which botanists have designated them: — heterophýlla (syn. simplicifòlia), polemoniifòlia, parvifòlia, lentiscifòlia, sambucifòlia, longifòlia, tamaricifòlia, juglandifòlia, ovàta (the oval-leafleted), láncea (the lance-leafleted), pannòsa (the cloth-leafleted), and the (O'rnus) rotundifòlia. In their bark, too, while devoid of leaves in winter, some of the kinds are very interesting. The gold-barked ash is well known to be strikingly so; and there is the rough-barked ash, and the streaked-barked ash (O'rnus striàta); the coloured-branched, brown-branched, black-twigged, grey-branched, and the green-branched, and others besides, which are interesting in this point of view. A gold-barked variety with drooping branches is now known, and is now in Jenkins's nursery, see p. 330. The shoots of young plants of the common ash have, during their growth in summer, if vigorous, a pleasing purple hue. Conspicuous beauty in blossoms the species of *Fráxinus* have not; but the species of O'rnus are not devoid of beauty in their panicles of white blossoms. The flowers of O'rnus europæ'a are produced in the beginning of June, are odorous, and their odour is not disagreeable: it seems to be produced from the pollen.

On the Common Ash (Fráxinus *excélsior*) I have, I find, these notes, perhaps worth expressing: — This tree prefers a tenacious loamy soil; and some individuals, which I know, thrive in meadows through which watercourses pass, and whose soil is, consequently, moist. The branches of old ash trees are not rarely pendulous; much less so than those of the drooping ash, but yet obviously so. In a row of ash trees, apparently all of the same age, and nearly of the same size, some trees, in some years, are seen to bear a profusion of seeds, while others, near them, have but a meagre crop. It is easier to state this fact than to account for it. The common ash is liable to a disease in its inflorescence, either upon particular trees or in particular seasons: the whole inflorescence becomes, without flowering at all, a conglomerate and, in some degree, a solid mass. Many species of trees shoot twice a year: in the spring and soon after midsummer. So far as I have observed, the ash does not, or does but inefficiently, produce a second shoot: perhaps I am wrong in this. A correspondent at Dundee, "noticed," on Nov. 11. 1833, "in one of the dens at Will's Braes, an ash tree protruding fresh green foliage from the new shoots of the present year." In Lejeune and Curtois's *Compendium Floræ Belgicæ* we have read that the ash is frequently cultivated in the province of Liège for the sake of its leaves ("vaccis grata"), grateful to cows. Ash poles last longer, and are preferred to poles of other kinds of wood, for hop-poles. The wood of the ash is, by the skill of the cooper, made to conduce much to the domestic comforts of man. The *Pt*ínidæ, a family of species of minute beetles, whose larvæ perforate, traverse, and consume wood, like the wood of ash as well as, I think better than, the wood of any other species of British tree.

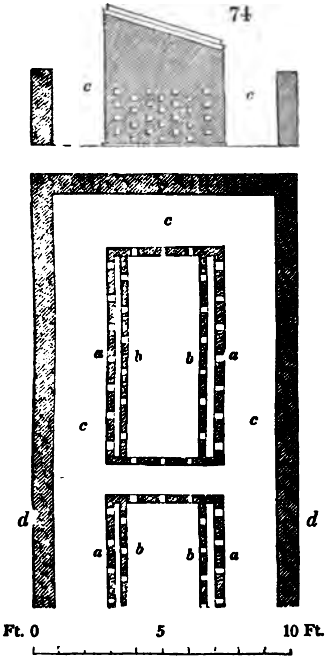
The Drooping Ash Tree seems capable, by the aid of art, of almost rivalling the famous Banyan tree of India (*F*ícus índica). In the garden in front of the Vernon Arms, in Pleasant Row, opposite York Place and Clarence Place, New Road, London, is a tree of the drooping ash, whose branches are trained on horizontal trellises, at the height of about 7 ft. from the ground, over twenty-eight seats and fourteen tables, covering a space twelve yards long by seven yards wide; thus forming in itself alone, when in leaf, one large and umbrageous arbour. It is needless to add that this tree belongs to the inn. Of the seats and tables mentioned, fourteen seats and seven tables, each about two yards long, occupy one side of the arbour, and as many the other; and there is a walk up the middle for the convenience of access to the two sides. The stem of the tree is in the centre of the arbour, and carefully preserved from injury by a box-like frame, the boards of which are perforated towards the bottom to admit air. The extremities of the branches already extend beyond the roof of the arbour, and are trained to the side trellises. The tree is a beautiful specimen, and in full health and vigour.

Has the remarkably large Drooping Ash which the Duke of Devonshire, a few years ago, transplanted from the nursery of Messrs. Wilson, near Derby, into the grounds at Chatsworth, thriven since the transplantation ? The tree, according to the newspapers, was fifty years old when removed, and, with itself and the earth about its roots, weighed nearly eight tons. " Some of the roots extended 28 ft., and the branches measured 37 ft. from the centre." Forty labourers and several horses were occupied in removing it from the ground, and loading it upon the machine used for transporting it.—In p. 180., but particularly in p. 408., it appears that seeds of the drooping ash sown have not been known to produce plants with drooping branches, but always with erect ones. — *J. D. June*, 1834.

Art. XIII. *On the Culture of the Cucumber at Stoke Place, with a Ground Plan and Elevation of the Pits in Use there.* By Mr. Patrick.

I SEND you herewith a ground plan and elevation of my cucumber pits; and I think the plan on which they are constructed one of the neatest and most simple that I have met with. I have no doubt but those who choose to adopt this method will find it the easiest to work, and the most successful of any plans which have heretofore been tried; and it combines economy with neatness, as the heat can be kept up with one third less dung than is usually employed. Whoever tries this plan will, no doubt, succeed, as there is no danger whatever of either burning the roots or steaming the plants.

I am aware that many gardeners will think my pits too small; but I can assure them that there is ample room for the plants to grow, and to continue in perfect health with a plentiful crop all the summer season; and, provided they are properly managed, six lights of these pits will be sufficient for the supply of any moderate family, from the beginning of January to the middle of summer. Pits of this size have a decided advantage over larger ones for early work, as you can keep up in them at all times a quicker and more lively heat, and with much less expense, than if they were larger; because, the larger the lights or pits are, the stronger the linings will require to be. You will see, by the plan (*fig.* 74.), that a range constructed as I propose has an open space, between each three lights, of 12 in. wide, so that



three, six, or more lights, as required, may be worked in succession. The dung in these openings, when once put in, is not to be turned like the linings; since, as the pits are pigeon-holed, and without flues at the ends, the roots will work through, and receive a deal of nourishment from the dung in the openings when it is decayed. These openings are likewise exceedingly serviceable in cold or damp weather, as they afford the opportunity of topping up all round with fresh dung. The plan (*fig.* 74.) shows the beginning of my cucumber and early melon range, which has nineteen lights. It begins with two lights, and ends with the same, but the intervening length is divided into pits of three lights each, with openings between, as before stated. *a* is the outside wall of the pit, which is of 4-inch brickwork, pigeon-holed all round, as shown in the elevation; *b* is a brick-on-edge wall, worked up solid, except one row of pigeon-holes at the bottom, left for drainage. This inner wall must be brought up one course higher than the pigeon-holes in the 4-inch work, or outer wall; and, by covering the cavity between this and the outer wall with a double layer of plain thin 6-inch tiles, it forms a flue back and front. The plain tiles require to be double, because the centre of each tile which finishes the flue must be firmly bedded over the joints of those first laid. This must be particularly attended to, as the flue must be made steam-tight. The advantage of this flue must be obvious to the most superficial observer, as, by it, the violent bottom heat from the linings, which is the bane of all forcing, is moderated; and, as much of the heat is transmitted through the tiles, it diffuses a mild and genial warmth, which is circulated among the plants, without there being any danger of too much heat among the roots. It will here be necessary for me to observe that the centre of my pits is filled up entirely with mould as high as the flues, except about six inches of fresh turf chopped to pieces with the spade, to be put into the bottom for drainage. This I consider by far the best material that can be used for this purpose, and the plants will show the benefit they derive from it as soon as their roots begin to touch it. *c* is the cavity for the linings; and *d*, a 9-inch wall which surrounds the whole. I should have given you my method of treating the cucumber, from the sowing of the seed to the cutting of the fruit, or all through the season; but the subject of late has been very largely treated upon, and most gardeners think their own way best. It may be sufficient for me to say, that I grow them on the trellis system, or Gould's plan.

Stoke Place, January 27. 1834.

ART. XIV. *On the Culture of the Cucumber during the gloomy Months of Winter.* By Mr. JAMES YOUNG, Gardener to J. Pulteney, Esq., Northerwood, New Forest, Hants.

ACCORDING to promise, I now lay before the readers of your Magazine my method of obtaining a plentiful crop of large well flavoured cucumbers, during the dark and gloomy months of our winters. I grow my plants in a flued pit, heated by linings of hot dung. The brickwork is exactly on Mr. Macphail's plan; only, instead of having the pits filled with tan, leaves, brick rubbish, or stones, I have flues carried under each light, low enough to admit of three strong rafters of oak being built into the flues, the length of the pit: these are covered with oak planks, 1 ft. wide, with half an inch left open between each plank, to drain off the water from the plants. The flues are carried up brick on edge close, so that no steam from the dung is admitted into the pit. The rafters over the flues are 2 in. above them, so that the heat rises freely into the pit; the floor to support the mould in which the plants are to be grown is 9 in. lower than the side flues; so that there is a hot-air chamber under the plants, which gives them a strong heat, with no risk of burning the roots; while the side flues keep the atmosphere in the frame corresponding with the heat that the roots receive from the hot-air chamber underneath. When the plants extend to the sides of the frame, I cover the flues with mould, so that the plants may have at least 15 in. of soil for their roots to grow in. I sow the seed on a slight hot-bed in April, and the plants are ready in May to be planted in a bed of rich earth. I then supply them well with water during the summer; and, by the 15th of September, I take as many cuttings of the plants as I think I shall want, and put them into 48-sized pots, one cutting in each pot. I then plunge the pots in a hot-bed, and shade them when the sun is strong. They will root freely in a few days. By the end of the month, I shift them into 32-sized pots; and, by the 20th of October, plant them where they are to produce their fruit during the winter. Two plants under each light, I find, do better than more, and, if the cuttings have been well managed, fruit will be set on them before turning them out of their pots.

I have cut good fruit from plants treated in this manner, after they had been turned out of their pots only ten days. I planted three lights the 15th of last October; I cut by the 28th of the same month, and I have cut from three to six excellent ones every week since. My plants are now in good health, with plenty of fruit set, and good ones fit to cut; and, by being well attended to, they will produce fruit abundantly all the summer. I water very little after the second week of November, until the days begin to lengthen; and, as the plants advance in growth, I put a little mould on the strongest joints, which makes them produce fresh roots: this makes the plants grow strong, and also swells the fruit much larger than they would be, if left to themselves. My plants need very little cutting or stopping; for, being cuttings taken from plants that have been in full bearing all the preceding seasons, they are not so apt to ramble as seedling plants. My liberal employer has lately built two very fine vineries. The mode of forming an elevated border for the vines, and a method that I have adopted of pruning and training them, may form the subject of another letter.

Northerwood, Feb. 15. 1834.

We shall be happy to receive an account of the method of forming the border for the vines, and of training and pruning them. — *Cond.*

Art. XV. *Short Communication.*

Cèreus speciosíssimus. — In the month of August I take off as many cuttings as I intend to strike, and suspend them by a string in the warmest part of the green-house, leaving them there for about three months. I then pot them in a compost, consisting of equal quantities of leaf mould and peat mould, mixed with one sixth part of thoroughly rotten dung. The pots I use are 48s or 60s, according to the size of the cuttings; not more than one being put in each pot. After watering, I set the plants on a shelf in a warm part of the green-house, where they will bloom in the following spring. After the bloom is over, very little water is given for three months, in order to bring the plants into a state of repose. They are then shifted into larger pots, if necessary; but, at all events, some of the old mould is removed, and some rich compost, such as that above described, is added. In this manner I raised a plant in the garden of Robert Searle, Esq., at Lympstone, in Devonshire, between 1827 and 1833, which is now 6 ft. high, and 5 ft. in circumference. It grows in a round tub about 18 in. in diameter, and 20 in. deep. — *Wm. Dunsford. Horticultural Society's Garden, Chiswick, April,* 1834.

REVIEWS.

Art. I. *Ladies' Botany; or, a Familiar Introduction to the Study of the Natural System of Botany.* By John Lindley, Ph.D. F.R.S. &c. &c. &c.; Professor of Botany in the University of London. 8vo, 302 pages, 25 plates. London, 1834. 16s. plain, 1l. 1s. coloured.

We look upon this work as one which will do more towards rendering the study of botany popular, than any other which has appeared since botany became a science. Dr. Lindley has here done what, in 1825, we proposed for him to do in the Natural Arrangement Division of our *Encyclopædia of Plants.* It would, however, have occupied too much room in that work.

The difference between this popular introduction to botany and all the other popular introductions which have preceded it is, that Dr. Lindley's object is to make the reader acquainted with the nature of plants, while all the others attempt little more than endeavouring to teach the pupil how to find out their names. "All seem curious," Dr. Lindley observes, "to know something of the natural system, and many, no doubt, take infinite pains to understand it; but it is to be feared that a large portion of those who make the attempt are far from meeting with the success their industry deserves. On all hands they are told of its difficulties; books, instead of removing those difficulties, only perplex the readers by multitudes of unknown words, and by allusions which, however clear they may be to the experienced botanist, are anything rather than illustrative in the eyes of a beginner, who is often fairly lost in a labyrinth of resemblances, differences, and exceptions. The cause of this lies not in the science itself, so much as in the books that are written concerning it. Since the appearance of my *Introduction to the Natural System of Botany*, in 1830, several works of great merit have been published on the same subject both in this country and abroad; so that the student is abundantly supplied with guides; and, if his object be to understand it, as an important branch of natural science, they are sufficiently well adapted to his purpose; but, for those who would become acquainted with botany as an amusement and a relaxation, these works are far too difficult. Treating the subject, as they do, in great detail, and without consideration for the unlearned reader, the language, the arguments, and the illustrations employed in them, must be unintelligible to those who have no previous acquaintance with botany. The characters of the natural groups or orders, into which the vegetable kingdom is divided, are not, as a whole, susceptible of such an analysis as a young student is capable of following; and I can quite understand how the whole system may appear to be an unintelligible mass of confusion. It has therefore occurred to me, that if, without sacrificing science, the subject could be divested of the many real, and of the still greater number of imaginary, difficulties that frighten students; and if they could be taught to recognise the natural tribes of plants, not by mere technical characters, but by those simple marks of which the practised botanist exclusively makes use, a work in which such objects are attained might be found of some utility." (p. 5.)

The *Ladies' Botany* consists of twenty-five letters, each letter being illustrated by a copperplate engraving of the size of the page. The subject of each letter is one, two, or more of the natural orders. The engravings are all of plants common either in the fields or in the ordinary gardens of Britain; and there is scarcely one of them that may not be easily procured by any person residing in the country.

We consider it quite needless to recommend this work: it must find its way into the library of every lady; and it ought to be in the coat pocket of every young gardener. In its present form, however, it is too expensive for the last class of readers; for whom we would strongly recommend an edition with the engravings done on wood. Such an edition might very well be sold at seven or eight shillings. As the work will soon be translated into French and German, as well as republished in America, casts of the wood engravings might be sold to the publishers in those countries, for as much as would return to the London publishers the prime cost; one third of that cost being, we believe, the usual rate at which such casts are sold. The copperplates might then be reserved for the coloured edition, which is quite cheap enough at a guinea, considering the very superior style in which the colouring is done.

Art. II. *Hooker's Journal of Botany*, &c. Part III. for July, p. 193. to p. 288. Six plates. 7*s.* 6*d.*

We have noticed parts i. and ii. of this work in p. 232., and expressed our satisfaction at its appearance. To the scientific botanist it must be highly acceptable; and, as we have already observed, it is not without popular interest. Mr. Hogg's paper on the classical plants of Sicily is concluded. In it we find that *C*éltis austràlis, the European nettle tree, is considered, by Mr. Hogg, as the true lotus tree of the Lotophagi. The tree is described by Theophrastus as of about the height and figure of a pear tree; with fruit of about the size of a bean, placed like the berries of the myrtle, changing colour, and ripening as a bunch of grapes; sweet, pleasant, and wholesome; and the food of the Lotophagi. Wine was made of the berries; and the wood, which was of a dark colour, and hard, was used, among other purposes, for making flutes. The wood is still used in Sicily for making flutes and other musical instruments; in France, hayforks are made of the branches; and, in Spain and Greece, the berries are still eaten. The seeds of *P*ìnus *P*ínea are called Pinocchi in Italy and Sicily, and are used in desserts, puddings, and cakes, like almonds. A cone of this pine, fastened on the top of a staff adorned with wreaths or flowers, made the thyrsus of the Bacchanalians; which was a symbol of authority carried by the priest of Bacchus, and is frequently to be seen in ancient sculptures and pictures. Mr. Hogg supposes the stone pine must originally have been introduced from Greece into Italy and Sicily, as he has never observed it in a natural wood, but only about villas and farm-houses. The young heads of *A*spáragus acutifòlius and álbus are cut from wild plants, and brought to table, in Sicily; they are thin, bitter, and often stringy, and form a poor substitute for the cultivated asparagus. Muscàri comòsum is common in the fields. According to Sibthorp, the bulbs of this hyacinth are still eaten in Greece. The berries of *S*mìlax áspera, when ripe, are of a beautiful red colour, and are very ornamental: the plant grows as a creeper in the hedges, on trees, &c.; more especially the variety auriculàta. The date palm is not uncommon in Sicily; and this tree, with the American aloe and the Indian fig, gives to the Sicilian landscapes a singularly beautiful and almost Oriental appearance. The dwarf fan palm (*C*hamæ'rops hùmilis) covers the wild uncultivated land and hills of Sicily, as the furze does those of England. "A kind of light but strong hat is made by neatly plaiting the leaves together; and the plant is used for brooms, seats for chairs, thatch for cottages, and many other purposes." (p. 214.) The stems of the *A*rúndo *D*ònax, the cultivated or pipe reed, are used for "many domestic purposes in Italy and Sicily; for fences in gardens and vineyards, for props to bind vines to, and for making shepherds' pipes, distaffs, fishing-rods, walking-sticks, &c." Wheat, for which Sicily has been celebrated from the very earliest period, is taken to certain places, named *caricatorj*, and warehoused in pits, to be ready for exportation. Oats are preserved in a similar manner in the south of Russia. "The sugar cane, having been introduced from Africa, was some years ago much cultivated in the neighbourhood of Syracuse but of late it has been abandoned, on account of the trade with Brazil." From the Ripídium Ravénnæ, the Ravenna sugar cane, the shepherds' pipes are also sometimes made. The common rice is cultivated extensively near Lentini; and the air there is rendered very unwholesome by the putrefaction of the water and vegetation, occasioned by the intense heat of a burning sun. The Indian corn, or maize, is roasted when half ripe, and eaten by the common people; the flour is the real Italian polenta. The *Pap*ýrus antiquòrum has been long naturalised in Sicily. It was considered by Dioscorides as one of the most useful of all plants. "The different purposes to which it was applied by the ancients, in addition to the making of paper, are these: in medicine, for the cure of fistulæ and ulcers; for food to the natives, who chewed it either raw, boiled, or roasted, for the sake of its sweet juice; and for torches and candles; boats, sails, mats, garments, coverlets, and ropes were formed of it; and the roots were used as fuel, and for making cups and other utensils." (p. 219.) Mr. Hogg has treated on "vessels made of the papyrus," in our *Mag. Nat. Hist.*, in a paper which excited intense interest at the time of its publication: it is beautifully illustrated by engravings. (See *Mag. Nat. Hist.*, vol. ii. p. 324. to p. 332., and figs. 88. to 92.) "The head of the flower-stem of papyrus, resembling a thyrsus of many grassy filaments, was used to crown the statues of the gods, and to adorn the temples in Egypt. The Egyptian priests likewise wore shoes made of it; and the plant is of frequent occurrence in the ancient hieroglyphics. The papyrus has long been naturalised in Sicily; and flourishes in abundance on the banks of the small river which rises in the clear and limpid fountain of Cyane, now called La Pisma, and joins the Anapus a little before it flows into the great port to the south-west of Syracuse. To this spot the papyrus, in all probability, was originally introduced, either from Egypt or Carthage. It is not seen growing spontaneously in any other river in Sicily. One of the largest heads, gathered in La Pisma on May 31. 1826, measured 19½ in. in length; and the number of its umbellulæ was 397. It grows to the height of 22 ft. or 25 ft. Paper is sometimes prepared from it, merely as a curiosity, and sold at Syracuse." (p. 221.) This very interesting paper concludes with an enumeration of the plants found by Mr. Hogg, arranged according to the natural system, and amounting to 160 species.

There are a number of other articles in this part of the *Journal of Botany*, but they chiefly consist of scientific matter.

ART. III. *Royle's Illustrations of the Botany and other Branches of the Natural History of the Himalayan Mountains, and of the Flora of Cashmere*, &c. Part III., containing p. xiii. to xx. of the Introduction, and p. 73. to 104. of the Illustrations of the Natural Orders; with one plate of fossil plants, one of animals, and eight of living plants; the latter and the animals beautifully coloured. London, folio. 20*s*.

WE have noticed part ii. of this work in p. 149., and part i. in IX. 691., and we have now to state that, as it advances, its execution continues to be of first-rate excellence. The introductory matter of the present part relates chiefly to the height of the Himalayan Mountains, of which there are twenty-eight peaks higher than the peak of Chimborazo, which exceeds 20,000 ft.; while one of the peaks of the Himalayas is 25,000 ft. high. The illustrations of the botany of the Himalayan Mountains commences with the conclusion of the order *C*apparídeæ. It appears that as the flower buds of the *C*ápparis spinòsa are employed in Europe as a seasoning, so the fruit of *C.* aphýlla is in India formed into a pickle. The flower-buds and seeds of the caper of Mount Sinai (*C.* sinàica) are also pickled. Under *P*olygàleæ it is stated that *P.* crotalariöìdes is employed as a cure against the bites of snakes; as is *P.* Sénega in South America. Under *L*íneæ, we are informed that the common flax is cultivated everywhere in India, but only on account of its seed, the mucilage of which is used in medicine, and the oil in the arts. The stalks of the plant, which in other countries are most valued, are in India thrown away; and other plants, such as *H*ibíscus *c*annábinus, and Crotalària *c*annábina are cultivated almost in the same field, for the very products that the flax would yield (p. 82.) Under *M*alvàceæ, a number of different species are mentioned as affording fibres which are used in India as substitutes for hemp; and the flowers of *M*àlva *A*lcèa, and *H*ibíscus *R*òsa sinénsis, having an astringent property, are employed both in India and in China for blackening the eyebrows, and also the shoes. The mucilage afforded by all the *M*alvàceæ, the Bombàceæ, Byttner*iàceæ*, and the *T*iliàceæ (which Mr. Royle agrees with Mr. Brown in thinking ought to be united into one order), being entirely innoxious, might be seasoned, and used as food. The cotton plants, species of *G*ossýpium, belong to the *M*alvàceæ, which, relatively to warm climates, must be considered as a very important order. A proportionate space is in consequence given to describe the culture of the cotton plant in different parts of India. Under Byttner*iàceæ* we are informed, on the authority of Dr. Lindley, that the gum tragacanth of Sierra Leone is produced by a species of Stercùlia. Several plants in this order, as might be expected, afford fibres which make a good substitute for hemp. All the families in the order *T*iliàceæ, such as *C*órchorus, Triumfétt*a*, and Gréw*ia*, afford mucilage, and a tenacious fibre that may be used either for making flax, or mats, like the European garden mats, which are formed from the *T*íliæ. It is remarked that the inner bark of the Gréw*ia* oppositifòlia is used in the Himalaya for the same purpose that the bark of the *T*ília europæ'a is in Russia and Sweden. The leaves of the different species of Gréw*ia* are given as fodder to cattle, and are dried and stacked up for winter use, as those of the lime tree and the birch are in Sweden. It is exceedingly interesting thus to observe the same general character of climate accompanied by the same natural orders of vegetables; and that these vegetables are applied to the same general purposes by the inhabitants. In conclusion, we have only to observe, that the author has shown a superior degree of taste and judgment, in generalising his subject by comparing the productions of the Himalaya with those of other countries. The book is remarkably well got up (to use a publisher's term), and it ought certainly to find its way into the library of every botanist.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

Formation of Ground Ice. — In p. 118. we have noticed a theory on the subject of ground ice, by M. Arago, as given in *Jameson's Journal;* and we have now to notice another, by the Rev. Mr. Eisdale, as given in the same work, for July, 1834. We are induced to do so, because we think Mr. Eisdale's theory accounts more satisfactorily for the phenomena than that of M. Arago. Ground ice, it appears, is never formed but in streams, and after a severe hoar-frost. " The hoar-frost, which is congealed moisture, precipitated from the atmosphere, and falling into the river when the water is cooled down to the freezing point, cannot be dissolved. It retains in the water the very shape in which it descends from the air. When these small crystals fall on a deep unfrozen pool, the water being above the freezing point, the particles melt, and are incorporated with the water; but, in a shallow and agitated stream, almost the whole water is brought, in succession, into contact with the intense frost, and may thus be cooled down to the freezing point to the very bottom of the stream, before even a pellicle of ice is formed on the stagnant pool. All the particles of hoar-frost, then, or frozen vapour, which fall on such a stream, will remain unmelted; and, being tossed in all directions by the agitations of the current, will be brought into contact with the rocks, or other substances projecting from the bottom, to which they will readily adhere, and form a *nucleus* for that strange accumulation called *ground ice,* which is found nowhere but in streams." (*Jameson's Jour.*, vol. xvii. p. 172.) Since the above was transcribed, we have seen Mr. Greenshields of Englefield Park Gardens, who is well acquainted with the Vale of Kennet. He states that there is an immense deal of hoar-frost there, over all that part of the vale where the soil is a moist clay, and very little where it is a dry sand. The irregular outline of the moist clay district on each side of the vale is as distinctly marked by the hoar-frost as if it were confined with a wall. Mr. Greenshields thinks Mr. Eisdale's theory very likely to be a true one.

The Faculties of Mind necessary to form a Botanist. — Dr. Daubeny very correctly considers him "a botanist whose mind is imbued with the great principles by means of which plants can be collected into natural groups, and who strives to discover the general relation in which these groups stand toward each other; in short, who labours to construct a method, where the very place which a plant occupies in it shall, in a manner, announce its most prominent characters, the qualities it may possess, and its affinities with others. We hold the pertinacious attachment to the artificial system to be the cause of the low degree of estimation in which botanical science is, therefore, deservedly held in this country. If we are right in this opinion, it is certainly greatly to be regretted that that which was formerly dignified with the name of botany should yet linger in our schools, or that any should be found to teach it, since there has arisen in its stead a science which is beautiful, philosophical, and capable of the most varied and useful applications; capable of being applied to medicine, horticulture, entomology, chemistry, and, above all, to climatology, and, consequently, to geology. The method of Jussieu does, for the vegetable kingdom, that which the method of MacLeay does for the animal, viz., by putting us in possession of a single fact, or a few facts, it confers upon us the power of inferring many more, relating not only to the structure of the plants, but to the juices circulating in the vessels, and the products elaborated therefrom. If something more than the *name* of a plant be to be comprehended in botanical arrangements, let us imitate the example of Linnæus, who, conscious of the inadequacy of his artificial system to serve the cause of genuine botany, wisely abandoned it, and devoted himself to devising a natural method, and called upon all botanists to assist in accomplishing so desirable an object. Let us no longer cling to this system, which has been expelled from almost every other country of Europe, but rather let us cast it, like an idle weed, away, which cannot be suffered longer to deform the fair garden of philosophic truth." (*London and Edinburgh Phil. Jour.*, vol. v. p. 76.)

Influence of Colour on Heat, the Deposition of Dew, and of Odours.—Dr. Stark, in a paper in *Jameson's Journal*, vol. xvii. p. 65., has shown, by experiment, that one principle operates in the production of all the above results. A black colour, whether in solids or fluids, absorbs heat most rapidly, and parts with it most rapidly; dew is also deposited more rapidly on this colour than on any other, and with proportionate rapidity evaporated from it. Odours, whether agreeable, offensive, or of infectious diseases, are, in like manner, absorbed with greater rapidity, and in greater quantity, in a given time, by black colours; and discharged by these colours with proportionate quickness. The other colours are next effective to black in the order of blue, brown, green, red, yellow, and lastly white; which last absorbs and gives out heat, dew, and odour more slowly than any other colour. These facts will afford valuable hints to gardeners for the colours of walls, of walks, of rockwork, of soils, of coverings for protection, and even of their dresses.

Art. II. *Domestic Notices.*

ENGLAND.

A GARDEN School, in which boys will be taught gardening, agriculture, and rural economy generally; and girls, sewing, cookery, and domestic economy in all its details, is about to be established at Fordhook by Lady Noel Byron.

Her Ladyship has engaged, as head master of the establishment, Mr. Craig, who had formerly the care of the agricultural school established by the late Mr. Vandeleur in the south of Ireland, and who is now on his way to Switzerland, to inspect the establishment of M. Fellenberg at Hofwyl.

A Design for the Sheffield Botanic Garden, by Wm. Billinton, Esq., architect and civil engineer, has been sent us by that gentleman, with a request that we should give our opinion of it in this Magazine. — It is neatly drawn, and the ground plan of the building is very architectural. There is also a terrace walk, which would have a very good effect: but when we have said this, we have included nearly all that we can commend. The roads and walks are curvilineal, without, in many cases, a sufficiently obvious reason; the arboretum is confined to two compact clumps, not more than large enough for two or three orders; there is a small space for the natural system of herbaceous plants, equally disproportionate; a large space for the Linnæan arrangement, and a plot of beds radiating from the centre like the spokes of a wheel. The latter may please some eyes on paper, but in execution it would be intolerable, both in point of beauty and use. To render such a mode of radiating beds at all tolerable, the general figure ought to be circular. Here it is a parallelogram, with a triangle added to each end. If any one will try to radiate beds from the centre of such a figure, he will find what a very awkward impracticable result he will produce. We shall not say more; indeed, we are sorry to have been obliged to say so much, considering the very candid and liberal manner in which Mr. Billinton requests us to give our opinion on his plan publicly. It is, however, as we have before observed, p. 276., no disparagement to an architect not to be also a gardener. Mr. Billinton, we have no doubt, could do honour to our *Architectural Magazine*, and we invite him to become a contributor to that work. — *Cond.*

By the Use of hot Water at Wallington, the seat of Sir John Trevelyan, in Northumberland, 90 loads of coals, out of 220, were saved the first year. The value of these coals, including carriage, is about 6*s.* a ton. Instead of nine fires to four houses, there are now only two fires. The level system of circulating the water is adopted, and the work was executed by Mr. Cookson, iron-founder, of Newcastle. — *T. July* 8. 1834.

An Elevation and Section of a Peach-House, erected in 1830 for Lord Yarborough, at Brocklesby in Lincolnshire, have been sent us by the builder, Mr. Crosskill of Beverley, mentioned p. 277., accompanied with a description by the gardener at Brocklesby, Mr. Hedges. The house is 106 ft. long, and 11 ft. wide, in three equal divisions. The rafters are cast iron, and the sashes are of wood. In the front wall, and in the upper part of the back wall, there are cast-iron ventilators fixed in the manner of the shutters described and figured in II. 201. These ventilators are moved sympathetically by iron rods and pinions, and they have been in use three years without having gone out of order. The three divisions are heated by hot water from one fire, the upper pipe is flat, 18 in. broad, and 3 in. deep; and the returning pipe is circular, and about 4 in. in diameter. The whole is very satisfactory to Mr. Hedges, who, in his letter, bestows great praise on Mr. Crosskill, for the superior manner in which the work is executed. The cost, exclusive of the bricks, lime, and sand, was 1006*l.* — *Cond.*

The Irish Furze (U'lex europæ'a var. stricta), as a Forage Plant. — It has recently been found in Caernarvonshire, and other parts of North Wales, that this variety of the common furze may be more profitably cultivated in the field than the species. The reason is, the branches, when cut for use, do not require bruising before being given to horses or cattle. As this variety very rarely produces flowers or seeds, it is propagated by cuttings, which, however, strike in a bed of sandy soil as readily as willows. The cuttings should be taken off in the autumn, of the present year's wood, and they need not be above 3 in. long. They will be fit to transplant in the March or April following, and in the succeeding autumn they may be cut over with the scythe for the first time. We consider this a very interesting fact, and one which shows that it is from varieties, and hybrids, and even from monstrosities, which this is, that we are to procure the most valuable plants of culture. This has been well pointed out in Bishop's *Causal Botany.* — *Cond.*

A Collection of Hearteases, exceeding one hundred in number, was exhibited at the Metropolitan Flower Show at Salt Hill, June 19., and brought to Bayswater, for us to look at, on the following day. They had all been raised from seeds, by Mr. John Joseph Allnatt, junior, of Wallingford (mentioned p. 5.), within three years. A pan of flowers, selected from his seedling plants of 1833 and 1834, won the King William medal at the above show, although exhibited against selected varieties from various sources. In Mr. Allnatt's pan, not a flower of one old variety was shown. We took down the names of the following, of the varieties raised by Mr. Allnatt in 1833: — Allnatt's Achilles, Orpheus, Ajax, Plato, Arcadia, Hecuba, maculòsa, splèndens, zebrìna, regìna, and tigrìna. Maculòsa has a large corolla, with a yellow ground, and three or four pretty violet spots towards the centre of the upper petals. The striped kinds, as zebrìna, &c., were very pleasing. After this show, Mr. Allnatt offered publicly to show a hundred varieties of this flower, against the same number, by any other grower, for 10*l.* The varieties shown us were of very great beauty, and remarkably distinct, considering the great general resemblance of one heartsease to another. Amongst the flowers of seedlings, which have blossomed this year (1834) for the first time, a few showed a strong tendency towards a tint of crimson, which is the rarest of colours in the flowers of the heartsease; these Mr. Allnatt much esteems, and is sanguine enough to hope that, in the known susceptibility of sportiveness in the heartsease, kinds with corollas more and more tinted with crimson may be produced. All Mr. Allnatt's varieties may be purchased from Mr. Hogg, at Paddington; who is appointed his sole agent in London. It is a remarkable fact, that, from a capsule of seeds gathered from the finest cultivated varieties of heartsease, plants perfectly wild, both in their foliage and their flowers, will frequently be produced. In like manner, in cultivated fields and gardens, we occasionally find a fine variety of heartsease, which seems to have sprung at once from seeds of the wild variety. We believe this to be more or less the case with all cultivated annuals, or plants of short duration; but the transition is by no means so easy with regard to fruit trees, for the seeds of a golden pippin, or a Hawthornden, though they may produce some varieties unlike the plant, will never produce a genuine crab.—*Id.*

Orchideous Plants from the Caraccas. — Sir Robert Ker Porter has promised me a supply of rarities from Caraccas, for the arrival of which I am looking out with considerable anxiety. These, he informs me, will consist of mareposas (orchideous plants); the flor de Mayo, or lirio de los valles (the lily of the valley); most probably an Amarýllis, Crìnum, or Pancràtium; and one or two more lirios (lilies), one of which he describes as being of a most beautiful crimson. To these, from a former letter, I am led to expect, will be added some roots of the appio, the root of which is a valuable esculent. — *W. Hamilton.*

A Box of Orchideous Plants and Bulbs, including above fifty species, has been shipped from Demerara, for Messrs. Low and Co., of the Clapton Nursery, by Mr. John Henchman, the botanical collector for that establishment. We anticipate some valuable additions from a region hitherto but little explored by collectors. — *Cond.*

SCOTLAND.

Comparative Trial of Walls of different Kinds.— The Caledonian Horticultural Society has published a Garden Report, dated June 1., from which it appears some trials have been made of the difference of temperature between a loping wall inclined to the horizon at an angle of about 50°, a wall coloured black, and a perpendicular wall; and, between perpendicular walls of freestone, whinstone (basalt), and brick. It appears that the sloping, the black, and the freestone walls, all indicate the same temperature at 6 o'clock in the morning; but that the average temperature of the brick wall, at that early hour, is, during April, a degree colder. This brick wall, however, being more porous, and retaining a greater quantity of heat, has shown, during May, a considerably higher temperature than any of the others, owing to the increased influence of the sun. At 1 o'clock P. M. the average temperature of the sloping wall is 7° higher than that of the brick wall. The next warmest at that hour is the dark-coloured or whinstone wall, which is only 3° lower than that of the sloping wall. At the same hour, the freestone is 5° colder than the sloping wall, or 2° inferior to the whinstone. At 6 o'clock P. M., the sloping wall is 2° warmer than the freestone and the brick walls, and 5° warmer than the whinstone wall, which last, at that time, is the coldest of all the walls. The results will be more satisfactorily ascertained when the fruit of a cherry tree, a vine, or a peach, trained on the sloping wall, have been compared with that of one of the same kind placed against the perpendicular freestone wall. When hoar-frost forms, the sloping wall becomes the coldest during the night, by 2° or 3°, or perhaps more. To render it effective, therefore, it will be indispensable to have a covering of thin canvass drawn over it during the night.

A Strawberry Wall, on Mr. Byers's plan (V. 438.), has been formed, and placed in the direction of north and south, on a surface declining to the horizon, at an angle of about 250°. For this reason the water furrow along the crest or ridge of the wall has stops at various places, to allow the water to be equally absorbed. The advantages anticipated are, increased surface for the plants, and an earlier crop of clean fruit, easily gathered.

Of *Grapes*, between twenty and thirty sorts have been proved, and their description, by Mr. Barnet, will be useful in the preparation of a new edition of the Horticultural Society's Fruit Catalogue. The following sorts appear to us the newest, or the most worthy of notice: —

Fruit white, oblong; leaves obtusely lobed.—Savagnien Blanc. Clusters small, compact; berries transparent, light green, of a rich musky sweet flavour; leaves dense, downy beneath. This variety was presented to the Society by John Robison, Esq., who kindly procured a collection of the finest table-grapes from Bordeaux. The fruit, being produced in the peach-house, has probably not been properly ripened, for want of sufficient heat.

Loudon's Seedling. A large showy variety; clusters large, and much branched, the branchlets being divided; berries large, oblong, of a greenish-yellow colour; seeds small; flesh firm, juicy, sweet, and high-flavoured; leaves large, slightly lobed, slightly serrated; a great bearer; readily produces a second crop, especially when grown in a pine-stove. Raised from seed in the garden of H. Menteith, Esq., of Carstairs, by the gardener, Mr. Robert Loudon. [Should our namesake see this, we will thank him for a cutting.]

Malvoisie. This is a small grape, and seems to set sparingly; the clusters and berries small, oblong, and pointed at the ends; of a bright light green, transparent; flavour rich and pleasant; seeds large, but, from being grown in the peach-house, evidently not in perfection; the leaves are small, round, slightly lobed, with large coarse serratures, of cucullated form. This is one of a collection received from Bordeaux by John Robison, Esq., as noticed above.

Black or Red, fruit oblong.—West's Saint Peter. Clusters large, long, and not much branched; berries middle-sized, oblong, approaching to round, of a deep bluish-black, with a glaucous bloom; footstalks short; flesh firm, juicy, with peculiar rich light flavour; seeds middle-sized; skin thin; a great bearer, and ripens late; the fruit hangs on the plant a considerable time without shriveling; and the plant retains its leaves, which are of a deep green colour, slightly lobed, sharply and doubly serrated; footstalks and leaves slender; the leaves are stained with red towards decay. The best late grape that has come under my observation.

Frankenthal. Clusters large and branched; berries large, round, or approaching to oblong, of a shining black colour; glaucous; seeds small; flavour rich; a good bearer, and ripens late. This is only a subvariety of Black Hamburgh; the chief difference being, that it is more oblong, and more irregular in shape.

Black Tripoli. Clusters long and much branched; branchlets branching; ripens late; berries small, globular, or approaching to oblong, with short footstalks; of a brownish-red colour, tender and juicy, sweet and high-flavoured; leaves large; footstalks short, reclined; lobes moderately deep, coarsely and unequally serrated; seeds small, adhering to the footstalk; skin thin and shriveling, having the appearance of the currants of the shops; a good grape, but rather delicate. The variety was received among a collection from the Duke of Portland's, at Welbeck, and is probably the same as that mentioned in Mr. Lindley's *Guide to the Orchard*, p. 192. no. v.

Blue Tokay. An abundant bearer, and ripens early; the clusters very small, and scarcely branched; berries small, globular, of a brownish-blue colour; flavour sweet and rich; seeds large; skin tough; leaves small, lobed, finely serrated, of thick texture, downy below; the juice is very rich. This is the Blue Tokay of Lindley, p. 198. no. xx., certainly not the Malvoisie, as received from Bordeaux, there quoted as a synonyme from Bradley; but I have not at present an opportunity of referring to that author.

De la Belgique. This variety with us is rather a shy bearer, and ripens late; clusters long and much branched; branchlets branchy; berries of moderate size, almost globular, or more long, of a rich bluish-black, and fine glaucous hue, closely set; the peduncles short, forming a close bunch; juicy, flavour tolerable; seeds large; skin tough; leaves large, slightly lobed, serrated; upper surface slightly hoary, tomentose below; footstalks long, slightly stained with reddish-brown; rather coarse, but probably pretty hardy. Presented to the Society by M. Bosc, Director of the Jardin des Plantes; not mentioned in any of the books that have been examined; bears a slight resemblance to the Esperione, but the bunches are double the size of those of that variety.

Red Muscadel. Clusters long and scarcely branched; berries middle-sized, oblong, of a brownish-red colour; flesh of firm texture; seeds large; flavour sweet and pretty good; leaves large, deeply lobed, coarsely serrated, light shining green; ripens late, and keeps long on the plant.

Blue Raisin. Clusters very large and showy, much branched, the footstalks short; the berries large, oblong, of green mixed with brownish-red, seeds large, adhering to the footstalk, fleshy and firm; ripens very late. Among other grapes in the vinery, it seems not to ripen, which is the only situation in which I have had an opportunity of seeing it.

Chasselas Rouge. This sort only fruited very sparingly. The berries are middle-sized, of a brownish-red colour, transparent; flesh firm, sweet, and high-flavoured; seeds small; leaves supported on long red-coloured footstalks; and the leaves conspicuously coloured with red ribs, not much cut, slightly serrated. As far as my observations go, this seems an excellent grape, with a good light flavour. Received from Bordeaux through the kindness of John Robison, Esq. Sec. R.S.E. — *P. N.*

A new and curious Variety of Pòa *nemoràlis.* — I have lately found a grass the most curious I have seen or heard of. It is a variety of the *P*òa nemoràlis, with the culm or stalk about as white as this paper. The foliage is green, with a small white streak up the back rib. The enveloping spathe and grass are also of a beautiful deep green, as are the flowers or parts of fructification, though the peduncles are white. If it retains its white colour after drying, of which I entertain some doubts, it would far surpass any bleached straw for plait.—*A. Gorrie. Annat Gardens, June* 26. 1834.

This must prove an interesting variety, if it should not revert to the usual green condition of the species, to cultivate in a shaded border in a garden. I once met with a strikingly pale-panicled variety of *D*áctylis glomeràta. —*J. D.*

ART. III. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly Number containing eight plates; 3*s.* 6*d.* coloured, 3*s.* plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly Number containing eight plates; 4*s.* coloured, 3*s.* plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Sweet's British Flower-Garden; each monthly Number containing four plates; 3*s.* coloured, 2*s.* 3*d.* plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

POLYPETALOUS DICOTYLEDONOUS PLANTS.

III. *Ranunculàceæ.*

1637. *R*ANU'NCULUS 14562 *m*illefoliàtus. [Sw. fl. gar. 2. s. 248
2 grandiflòrus *D. Don* large-flowered ♃ ♃ or ♃ ap. Y Mt. St. Angelo, Naples 1833. D lt.l
"*R.* gargánicus *Tenore*," *D. Don*, in Sw. Fl. Gar., Gard. Mag. IX. 241., X. 341.

Leaves tripinnately divided, with linear lanceolate segments. Stems several upon a plant, each usually single-flowered; corolla and stamens of a golden yellow colour; corolla varying in size, sometimes 1½ in. across. Figured from the collection of Mrs. Marryat; whose daughter, Mrs. Palliser, received it, from Professor Tenore, under the name of *R.* gargánicus. (See X. 341.) Garganus is the ancient name of the Mount St. Angelo of the present day. (*The Brit. Flow.-Gard.*, July.)

XIII. Anonàceæ § *Schizándreæ* Blume.

SPHÆROSTE'MA *Blume.* (*Sphaira*, a globe, *stēma*, a stamen; the filaments of the stamens, which are in number many, are all coadunate into a fleshy solid mass, the anthers only being at liberty, and nestling in a number of little excavations of the mass.) 22. 12. Sp. 1. —
[Bot. reg. 1688
propínquum *Blume* near akin (*to ? Kadsùra*) ♄ ☐ or 10? jl Y Nipal 1828? C p.l
The male sex only of the species is yet alive in Britain.

A shrub with a twining glabrous habit, and aromatic leaves; which last are ovate acuminate, toothed, petioled, and alternate. The male flowers are of about the breadth of a shilling, and solitary, on not long footstalks, in the axils of the leaves: each consists of three green sepals, and three yellow petals, and, in the centre of these, the yellow anther-bearing mass. Dr. Wallich found this species in Nipal, on Mount Sheopore, and on hills about Sankoo. Dr. Lindley has deemed it, in Britain, "a hot-house climber;" and has added: — "It is easily propagated by cuttings; and, in the fertile state [the female sex of it], must be a handsome plant, with its long pendulous spikes of scarlet berries. Unfortunately, the plant which flowered in the garden of the Horticultural Society last July, and from which our drawing was taken, was a male; so that we are not likely to see these berries until a fresh importation of plants shall have taken place." We are, nevertheless, very glad to be able to learn thus much of the male only. (*Bot. Reg.*, July.)

XLVII. *Onagràriæ* § *Fuchsi*èæ. I send you some showy flowers of a hybrid fuchsia between Fúchs*ia* grácilis and F. coccínea, which I have raised in this garden [that of J. H. Tremayne, Esq., Heligan, Cornwall]. It is planted in the open ground; and was not, last winter (this being very mild), cut down by the frost. The plant is 5 ft. high, and 15 ft. in circumference, and is loaded with flowers: these are much larger, and of a better colour, than those of the F. virgàta, and render the plant a very showy one: it has been admired by all who have seen it. — *John Roberts. Heligan, Cornwall, June* 26.

The flowers of the hybrid are large and showy. From the tip of the germen to the tip of the stigma is a length of 2½ in.; the segments of the coloured calyx are 1½ in. long.

LXXVII. *Leguminòsæ.*

*L*UPI'NUS densiflòrus, of which we have quoted an account in p. 173., is figured in *Bot. Reg.* 1689.

"Seeds of it have been hitherto produced by it in such small quantities, that it still remains extremely rare."

2837. *A*CA'CIA.
+24679 elongàta *Sieb.* long-*branched* ♠ ⊔ or 6 ap.jn Y N.S.W. 1823. C s.l.p Bot. mag. 3337
+24716 umbròsa *Cun.* shade-*inhabiting* ♠ ⊔ fra 25 sp Pa.Y N.S.W. 1823. C s.l.p Bot. mag. 3338

Both these are figured from specimens supplied from the Kew collection; and the descriptions of them include notes on them by Mr. Allan Cunningham. *A.* elongàta is of a slender and graceful habit, and has drooping angular branches, narrow linear phyllodia (leaves) 3 in. or more in length, and numerous globose heads, about the size of a pea, of rather deep yellow scentless flowers produced two or three together, upon peduncles rather more than half an inch long, from the axils of the phyllodia (leaves). *A.* umbròsa delights in dry shaded woods in New South Wales. The phyllodia are 4 in. or 5 in. long, oblong-lanceolate, marked with two or three strong nerves. The flowers are produced in Britain in the spring, are powerfully fragrant, pale yellow, clustered into many globose heads, which are disposed, from seven to nine, upon axillary racemes. (*Bot. Mag.*, July.)

CXI*a*. *Córneæ* Dec. Of Benthàm*ia* fragífera, Mr. John Roberts, gardener to J. H. Tremayne, Esq., Heligan, Cornwall, has sent us some specimens in flower. His letter is dated June 26. The specimens quite confirm the idea of the desirableness of this shrub, already given, with other particulars respecting it, in IX. 367., X. 60. 69. The specimens (two) appear to be the tips of two branches: one of these bears eight branchlets, and seven of them are, and the eighth has been, terminated each by a head of flowers, green, small, subtended by four large cream-yellow involucral leaves; the other specimen has three branchlets, each tipped with a head of flowers attended by the involucral leaves. Only some few of the individual flowers in the heads were bearing petals. The plant, Mr. Roberts informs us, is 17 ft. high, spreads proportionably, and has its stem, at the bottom, 1¾ ft. in circumference; and presents the appearance of a small tree. With regard to the climate of Heligan, Mr. Roberts has known the snow to lie on the ground for three weeks; and has seen the thermometer as low as it has been in London.

CXXIV. *Tropæòleæ.*

CHYMOCA'RPUS *D. Don.* (*Chymos*, juicy, *karpos*, fruit; the fruit is a black juicy berry.)
8. 1. Sp. 1—2.— [Sw. fl. gar. 2. s. 245
+9316 pentaphýllus *D. Don* five-leaf*leted-lfd.* ‡ △] or 4 au.o R.G.P Buenos Ayres 1830. C s.p.l
Tropæ'olum pentaphýllum *Lam.* Mr. D. Don deems this plant the type of a new genus, which he has named as above. He has given his reasons at length in *Linn. Trans.*, xvii. p. 14. and 145. From the *Flower-Garden*, we may just quote as follows: — "The most remarkable peculiarity is in the nature of its fruit, which is a black juicy berry, not unlike, both in appearance and flavour, the Zante grape. Besides the reduced number of its petals [there are but two], a character the importance of which I am not disposed to insist much upon, the genus likewise differs in the persistent nature and valvate æstivation of its calyx, that of Tropæ'olum being imbricate and deciduous. —— I am inclined to think that T. dipétalum *Flor. Peruv.* will prove a second species of Chymocárpus; and it is possible that Tropæ'olum may include the types of other genera, when the nature of the fruit in the different species becomes better known. —— Chymocárpus pentaphýllus is stated to have been introduced in 1824; but this information is erroneous, the plant having been first raised by Mr. Neill, in 1830, from seeds collected at Buenos Ayres by Mr. Tweedie."

Chymocárpus pentaphýllus *D. Don*, planted early in summer, in an open border, in a mixture of sandy peat and loam, has been found to thrive much more vigorously than when retained in the green-house, to produce a profusion of blossoms, and ripen its fruit freely. Cuttings, planted in pure sand, and placed in a hot-bed, root readily. (*The Brit. Flow.-Garden*, July.)

CXXX. V*iolàceæ.*

701. *VI*'OLA 5708 pedàta.
2 flabellàta *D. Don* fan-*lfd.* ⚘ △ or ¥ o Li.P Georgia 1831. D p Sw.fl.gar.2.s.247
Dr. Graham and Mr. D. Don concur in deeming this plant but a variety of *V.* pedàta *L.*, and the *V.* digitàta *Ph.* as identical with this variety. Mr. D. Don thinks that the *V.* flabellifòlia of Lodd. *Bot. Cab.* 777. is also identical with it.

The leaves are divided in a fan-like manner. The corolla is large, and very handsome: lowest petal pale lilac on the inside; the two uppermost, and the upper half of the two side ones, dark velvet purple; behind, all the petals are of a pale lilac. "The plant is extremely beautiful, and highly deserving of cultivation in the open border. It was introduced by Mr. Drummond, from

Georgia, into the Botanic Garden, Glasgow; whence it was sent to the Botanic Garden, Edinburgh, in 1832, and there it first produced a succession of flowers in the green-house, in the beginning of Oct. 1833." (*Dr. Graham*, in *Brit. Flow.-Garden*, July.)

APETALOUS DICOTYLEDONOUS PLANTS.

LXXXII*a*. *Garryàceæ Lindley.* An order characterised in the *Botanical Register* for July, 1834, t. 1686.; and there stated to be allied to the Cupulíferæ; to connect them with the Coníferæ; and also, by means of some similarities to the Chlorántheæ, with the *Gnetàceæ.*

GA'RRY*A* Lindl. (Named, by Mr. Douglas, in compliment to *Nicholas Garry*, *Esq.*, secretary of the Hudson's Bay Company; to whose kindness and assistance he was much indebted during his travels in North-west America. — *Lindley.*) 21. 4. Sp. 1. —

ellíptica *Lindl.* elliptic-*leafed* ■ cu 6 o G N. California 1828. L l Bot. reg. 1686

The specimen figured is from a plant of the male sex, which flowered in the Horticultural Society's garden in Oct. 1833. It is not stated that a female plant is alive in Britain.

Very similar in appearance to a *V*ibúrnum. Its branches, when young, are pubescent and purplish; when older, smooth and greyish. Its leaves are opposite, devoid of stipules, shortly petiolate, oblong; about, according to the figure, 2 in. long and 1 in. broad; waved, acute, leathery, evergreen; dark green and smooth above; beneath hoary with simple twisted interwoven hairs. The flowers are disposed in pendulous tail-shaped catkins, of about from 4 in. to 5 in. in length. It was introduced, in 1828, from Northern California, where Mr. Douglas discovered it. In relation to British gardens, it may be deemed a hardy evergreen shrub: it prefers a loamy soil, and may be readily increased by layers. Dr. Lindley has remarked, that "it is probable that it is the greatest botanical curiosity in all Mr. Douglas's collections: for it appears to represent a natural order, on the one hand, altogether distinct from any previously known; and, on the other, connecting certain well-known natural orders in an unexpected and satisfactory manner." Dr. Lindley has, in *Bot. Reg.* t. 1686., elucidated the characteristics of the plant, and his views of its affinities. (*Bot. Reg.*, July.)

MONOPETALOUS DICOTYLEDONOUS PLANTS.

CLXX. *E*ric*à*ce*æ* D. Don.

Mr. D. Don has, in the *Edinburgh New Philosophical Journal* for July, produced "An Attempt at a New Arrangement of the *E*ricàceæ." This will be news of interest to botanical cultivators; all of whom have perceived that there has been much of heterogeneousness in the great collection of species hitherto referred to the genus *E*rica. Mr. D. Don says that "the examination of this interesting family [the *E*ricàceæ, which include the andromedas, &c.] was undertaken with the view of assisting my brother in the laborious undertaking in which he is now engaged [the elaboration of the work, *A General System of Gardening and Botany*, by G. Don, F.L.S.]; and, as a complete account of the species will appear in a forthcoming volume [vol. iii.] of that work, I have omitted most of them in the following pages," &c.

"As happens in other very natural families, the characters of the generic groups in the *E*ricàceæ are not so strongly marked as in those that are less so; but we are not, on that account, to give up the idea of dividing them..... Whatever opinion may be formed of their title [that of the groups into which Mr. D. Don has divided the *E*ricàceæ], to rank as separate genera, the arrangement of the species will, I trust, be found more natural than any hitherto proposed."

The names of the proposed groups, the etymology of their names, and the species typical of the groups, are the following: —

*E*rica (*E.* cinèrea *L.*), Gypsocállis (etymon not given. *E.* vàgans *L.*), Páchysa (*pachys*, thick; substance of the corolla. *E.* árdens *Andr.*), Ceràmia (*keramion*, a little pitcher. *E.* urceolàris *Soland.*), Désmia (*desmē*, a little bundle; flowers crowded. *E.* conférta *Andr.*), Eurýlepis (*eurys*, broad, *lepis*, a scale; calycine scales dilated. *E.* Halicácaba *L.*), Eurystègia (*eurys*, broad, *stegē*, a cover; calyx large. *E.* glaúca *Andr.*), Lophándra (*lophos*, crest, *anēr andros*, a man or stamen; cells of the anthers crested. *E.* pyramidàlis *Andr.*), Lámprotis (*lamprotēs*, splendour; calyx glistening. *E.* calycìna *L.*), Callista (*kallistos*, most beautiful. *E.* Wálker*i* Andr.), Eurylòma (*eurys*, broad, *lōma*, a margin; limb of the corolla dilated. *E.* Aitoni Willd.), Chòna (*chonē*, a funnel; figure of the corolla *E.* sanguínea), Syringòdea (*syrigx syriggos*, a reed or pipe; corolla longly tubular. *E.* vestìta), Dasyánthes (*dasys*, hairy, *anthos*, flower; corolla hairy. *E.* Sparrmánni L.), E'ctasis (*ektasis*, extension; stamens prominent. *E.* Plukenètii L.), Eriodésmia (*erion*, wool, *desmē*, a little bundle; the flowers resemble. *E.* capitàta *L.*), Octopèra (*oktō*, eight, *pēra*, a sack; capsule eight-celled. *E.* Bergiàna L.), Erèmia (*erēmos*, solitary; seeds one in each cell. *E.* tótta *Thunb.*), Saláxis *Salisbury* (neither etymon nor type is given), Callùna *Salisbury* (*E.* vulgàris *L.*), Blæ'ria L., Andrómeda L., Cassìope (*Cassiope*, the mother of Andromeda. Andrómeda tetragòna *L.*), Cassándra (*Cassandra*, the daughter of Priam and Hecuba. A. calyculàta *L.*), Zenòbia (*Zenobia*, the queen of Palmyra, distinguished for her virtue and learning. A. speciòsa *Mx.*), Lyònia Nutt. (A. paniculàta *L.*), Leucóthöe (a poetic name. A. axillàris *Solander*), Pieris (one of the muses. A formòsa *Wall.*), Phyllódoce (one of Cyrene's attendant nymphs. A. cærùlea *L.*), Bryánthus *Gmelin* (Menzièsia bryántha *Sw.*, and empetrifórmis *Ph.*), Dabœ'cia (Andrómeda Dabœ'cii L., Menzièsia polìifòlia *J.*). Menzièsia ferrugínea and globulàris constitute, it is remarked, a genus altogether dissimilar, and to be referred to the *Rhodòreæ*. We had the pleasure to remark to this effect in Dec. 1831: see VII. 718.

Erìceæ § Rhodoràceæ.

1339. *RHODODE'NDRON* †11012 arbòreum *Sm.* [Ex. bot. 6., Bot. reg. 890
1 sanguíneum *Lindl.* blood-coloured-*corollaed* ♀ └┘ spl 20 sp.my S Nepal 1817. L s.p [Bot. reg. 1240
2 ròseum *Swt.* rosy-*corollaed* ♀ └┘ spl 20 ap.my Ro Nepal 1817. L s.p [Bot. reg. 1684
3 níveum *Swt.* snowy-*white-corollaed* ♀ └┘ spl 20 f.ap W Nepal 1817? L s.p
R. arbòreum álbum *Wall.*

Dr. Lindley has thus spoken, in the *Bot. Reg.* for July, of the snowy-white-corollaed variety:—"Never did we behold any flower more perfectly lovely than this. Its leaves of the richest and deepest green, mellowed by the warm tone of their under surface; its large clusters of bell-shaped flowers, hanging loosely, yet compactly, by their slender stalks; and the half-transparent snowy corollas, without a stain or a spot, save what nature had given them to render their whiteness the more pure and brilliant, formed together an effect which few objects could rival, and none surpass. Neither the rich crimson of the [corollas of the] common tree rhododendron, nor the deep rose colour of [those of] its pale variety, can, for a moment, be compared with that admirable delicacy [of those of the snowy-corollaed variety], which no art can imitate, and no pen describe." We suppose that all three varieties of the *R.* arbòreum may be purchased of Messrs. Loddiges, Hackney; and of Mr. Knight, Chelsea.

521. AZA'LEA. [Paxton's mag. of bot. July, 1834, fig.
4341*a* Daniels*iàna* Paxton *Mrs. Capt.* Daniels's ♣ └┘ spl 3? ... Carmine China 1830. L s p

A species or a variety with splendid flowers, and considerable distinctness of habit and foliage, as these are depicted. "Stems pliant, and bending downward; producing numerous branches at the termination of each year's growth, disposed in rayed order." The leaves are in the mode of those of A. índica, but much smaller; and in this their greater smallness, and the spreading direction of the branches, cause the kind to remind us much of the kinds of Chinese azalea with variegated corollas, obtained by purchase from Mr. M'Gilligan, by Mr. Knight. (See IX. 474., X. 281.) From Mr. Paxton's Magazine we quote, that "Captain Daniels, of the East India Company's service, brought home several cases of rare plants for Mr. Tate of Sloane Street, in 1830, among which were the double red and variegated Chinese azaleas. We believe the present plant to be a genuine species, as we can trace no connection between it and any other known species or variety already introduced. At the suggestion of Mr. Tate, we have named this truly splendid azalea in compliment to Mrs. Capt. Daniels, as an honour due to that lady for the introduction of so fine a plant, and for the kind and liberal spirit with which the whole of the boxes were communicated." Mr. Tate will soon have plants for sale. (*Paxton's Magazine of Botany*, July.)

MONOCOTYLEDONOUS PLANTS.

CCXL. *Orchìdeæ.*

2529. GEODO'RUM.
22651*a* fucàtum *Lindl.* painted-*labellumed* ⚘ ☒ or 1 jl Ro.Var Ceylon 1832. D l.p. Bot.reg.1687
"It resembles G. dilatàtum; but has rather smaller flowers, and a very different labellum."

A single plant of this species, sent to the London Horticultural Society by Mr. Watson, produced flowers, in July, 1833, in the Society's garden. "It thrives in a hot damp stove, but requires to be rested after its leaves have withered. These are 1 ft. long, twice the length of the scape, which is curved in its upper part, and so renders the flowers pendulous: these are disposed in a compact short spike. (*Bot. Reg.*, July.)

2554. EPIDE'NDRUM. [Bot. mag. 3332
bicornùtum *Hook.* two-horned-*labellumed* ● [△] fra 1½ ap W.spot Trinidad 1831? D p.r.w

A charming species. The stem of the plant figured is nearly 1 ft. high, and bore about four leaves at its extremity; the peduncle was produced from the base of the uppermost of these, was 9 in. long, and bore a raceme of from three to four large and highly fragrant flowers: their odour is compared to that of the flowers of *I'*ris pérsica. Sepals and petals very much spreading, 1 in. long; and thus the expanded perianth is 2 in. across, pure white, broadly ovate, rather acute. Labellum standing forward, spreading, three-lobed, white, with a few purple small spots; and it bears on its disk two conical divaricating horns. The Messrs. Shepherd, of the Liverpool Botanic Garden, have introduced this species into the stoves of Europe, and provisionally deemed it a new species of Cattlèy*a*: "and it has many points in common with that genus." The figure is derived from a plant which produced its flowers under the care of "that zealous and excellent cultivator," Mr. Joseph Cooper of Wentworth Gardens. (*Bot. Mag.*, July.)

CCXLVII. A*sphodèleæ.*

1053. *O*RNITHO'GALUM.
biflòrum *D. Don* twin-flowered ♉ △| el 1½ ap W Peru 1832? O p.s Sw.fl.gar.2.s.246
Scilla biflòra *R. & P., Pers., Schult.*

Leaves broadly linear. Scape about 1½ ft. high. Flowers, upon slender rather long peduncles, in threes, pairs, or solitary, at short intervals, along the upper half of the scape. Perianth white, of less breadth than a sixpence. "Its habit is extremely graceful; and its flowers are delicate and pretty." Figured from the collection of Mrs. Marryat, Wimbledon, Surrey. Mr. D. Don says, "It should be planted in a mixture of peat and sand; and we have no doubt of its proving nearly, if not quite, hardy." (*The Brit. Flow.-Gard.*, July.)

3283. TRITELEI'A *Hook.* (*Treis*, three, *teleios*, complete; in allusion to the perfectly ternary arrangement of its parts. — *Lindley.*) 6. 1. Sp. 5. —
The above is Dr. Lindley's etymon of Dr. Hooker's word; and it quite supersedes those guessed at in *Hort. Brit.* genus 3283., Gard. Mag. X. 350. 178.
28010*a* làxa *Benth.* lax-*umbelled* ♉ △| or 1½ jn.jl Dp.B California 1832? O p.l Bot. reg. 1685
Five species of Tritelei'a have been described by Dr. Lindley, in *Bot. Reg.* t. 1293. and t. 1685. Of T. grandiflòra, it is remarked: — "North-west America [a native of]. Formerly cultivated in the garden of the Horticultural Society, but now lost." T. pedunculàris *Lindl.*, another of the species, has not, it is stated, been yet introduced; and we suppose that the two remaining species are also in this last case.

T. làxa seems, consequently, to be the only species alive in Britain. To the information quoted on this plant in p. 178., we may now cite, in addition, the following: — "No plant can be more easy to cultivate; it will grow in common garden soil; but prefers such a mixture of peat, loam, and sand as is found in a border of American plants. It appears to be perfectly hardy; and, if allowed to remain undisturbed, will propagate itself by offsets as well as by seeds." A plant of it, in the Horticultural Society's garden, has borne twenty flowers in an umbel. (*Bot. Reg.*, July.)

CCLI. L*iliàceæ.*

1027. *YU'CCA.*
†8517 supérba *Haw.* superb-*inflor.* ■ or 9 au W.St.P. ... ... Sk r.l Bot. reg. 1690
Y. gloriòsa *Bot. Rep.* 473.; but it differs from *Y.* gloriòsa *L.* "in the shape of its corolla, and in its arborescent stem." — *Haworth.* "Its leaves are more acutely pointed than those of *Y.* gloriòsa." — *Herbert.*

The specimen figured is from a plant which Mr. Herbert bought, twenty years ago, of Mr. Malcolm, nurseryman, Kensington. Mr. Herbert has spoken of it as follows: — "It is unquestionably the most magnificent plant in the flower-garden. The flower-stem rises 8 ft. or 9 ft. high; and the profusion of blossom is so great, that, as the lateral shoots are rather suberect than diverging, a pin cannot be passed between the flowers in the centre of the column. The deep crimson of the stalks and stem, and the purple stripe on the outer petals [? sepals] of the flower, remind one of the colour of [the perianth of] Crìnum amábile, and contrast beautifully with the glossy white flowers. It is a very hardy species, and flowers frequently. In a very dry season, the colour is not so deep; warm, or temperate, and showery weather brings it to the highest perfection of beauty." (*Bot. Reg.*, July.)

In p. 349. line 4. for "Lanària" read "Linària."

The Dividivi, or Cæsalpínia Coriària, as a Tanning Plant. — A letter from Jamaica, by one of the last packets, furnishes me with important information, which enables me to fix with the greatest accuracy the age at which seedling plants of the Cæsalpínia Coriària come into bearing. Dr. Bancroft's words are as follows: —

"Having recently obtained some particulars concerning the dividivi, I can state that it flowered in August last, for the second time, in about the fifth year of its having been planted: the first time was about twelve months before. There were no pods then produced, but an abundance of them last year, so that the branches were bent down with them. The flowers were yellow." The letter, from which this extract is taken, is dated the 17th of April, 1834. Hence the first time of flowering must have been somewhere about August, 1832, and the second in August, 1833. Now, upon referring to my memoranda, I find that the first supply of seed I sent went by the Emulous packet, which sailed in June, 1829, and reached Jamaica in the course of the following month; so that the seed could hardly have been sown much earlier than August, 1829. Hence, in 1832, the plants were only three years old, and in 1833 only four, not five, as Dr. Bancroft, from forgetfulness, states; though, even taking his estimate, it is more favourable than that of any other staple product of the West Indies, except sugar, which yields its crop in nine months: coffee, it is well known, does not come into bearing in less than seven, nor cacao, in general, under ten years. I shall subjoin a table illustrative of the comparative value of the dividivi, as measured by that of other astringent substances, calculated from the able experiments of Mr. Rootsey of Bristol, and confirmed by the results of experiments made both here and at Sandwich.

	Results of the infusion of 60 grs. in 5 oz. of water.					Number of grains of leather obtained by Mr. Rootsey from half an ounce of the infusion, or 6 grs. of the powdered substance, and a solution of isinglass. Consisting of			Proportion of tannin contained in 100 parts of each substance, as deduced from the experiments detailed in the 3d, 4th, and 7th columns of this table.
	Number of Experiments.	Number of grains of matter which was		Proportion per cent of matter which was					
		Soluble.	Insoluble.	Soluble in water.	Insoluble in water.	Grains of Leather.	Grains of Tannin.	Grains of Gelatine.	
Dividivi	First	46	14	76·6667	23·3333	7·5	3 45	4·05	57·5
	Second	45·5	14·5	75·8333	24·1667	5·75	2·645	3·105	44·836
	Mean	45·75	14·25	76·2500	23·7500	6·625	3·0475	3·5775	51·168
Nut Galls	First	35	25	58·3333	41·6667	4	1·84	2·16	30·6667
	Second	36	24	60	40	5·25	2·415	2·835	40·35
	Mean	35·5	24·5	59·166645	40·833355	4·625	2·2275	2·4975	35·45835
Sumach	First	25	35	41·6667	58·3333	0·125 – melted	0·0575	0·0675	0·95834
	Second	23	37	38·3333	61·6667				
	Mean	24	36	40	60				
Kino	First	22	38	36·6667	63·3333	melted ditto			
	Second	26·5	33·5	41·1667	55·8333				
	Mean	24·25	35·75	40 4167	59·5833				
Catechu	First	40	20	66·6667	33·3333	melted ditto			
	Second	40·5	19·5	67·5	32·5				
	Mean	40·25	19·75	67·08335	32·91665				
Oak Bark	First	19	41	31·6667	68·3333	1·75	0·805	0·945	13·4167
	Second	17	43	28·3333	61·6667				
	Mean	18	42	30	70				

Cássia Fístula. — It may be well to notice, for the information of your readers, that the timber of that most lovely flowering tree the Cathartocárpus (Cássia) Fístula, is as valuable as its pods, so long known in medicine for their pulp, being beautiful for turnery, and affording an excellent dye. I enclose a piece of silk dyed with it. [It was a delicate pink.] The dyers here persuaded me that the colour could only be extracted by a spirituous menstruum; but Mr. Watts informs me it can be extracted equally well by boiling in water. The tree grows in many of our West Indian islands, especially in Dominica; and this new property will add enormously to its agricultural and mercantile value, when once sufficiently known. This wood, on friction or by heat, exhales a delightful aromatic odour; and hence might answer for fans, and other uses, to which the costly sandal wood of the East is applied. — *W. Hamilton. Oxford Place, Plymouth, May* 20. 1834.

Art. IV. *Retrospective Criticism.*

The Horticultural Society at Hackney. (p. 324.) —Observing that G. Geddes wishes it to be thought that he is a member of the Stamford Hill Horticultural Reading Society, and that he complains of the treatment of the Horticultural Society established here, I beg to observe that no such person belongs to the Society, and that the communication was made without their sanction. — *W. Adamson, jun., Hon. Sec. to the Stamford Hill Horticultural Reading Society. Stoke Newington, July* 8. 1834.

Planting Oaks a Year or two before the Trees intended to nurse them, (p. 295.) — I observe that Mr. Bree intends to plant oak trees two or three years previous to putting in firs as nurses; and, having entertained the same opinions regarding the treatment of oak plantations for these last ten years, I need hardly say that I cordially agree with what Mr. Bree has expressed on the subject, and I sincerely rejoice that the experiment is about to be made; and that, too, by one so well qualified to give it a fair trial. Had circumstances permitted, and opportunity been afforded, this experiment should have been attempted years ago; entertaining, as I do, not the slightest shadow of a doubt as to the successful issue thereof. I am not only convinced that young oak trees will maintain their vital principle uninjured without the help of nurses, but that the aid of every agent necessary to constitute durable timber will be more liberally communicated in the absence of nurses than with them.

It is quite a mistaken notion to imagine, as some seem to do, that the art of rearing oak timber consists in stimulating the germinating powers beyond the natural impulse; and thus, by artificial means, forcing on the tree to a precocious maturity. Such a course is certainly not the best calculated to promote longevity, or impart solidity to vegetable bodies. The man who plants oak, plants not for his own benefit, but for that of future generations; and, if this is (as it ought to be) his real intention, he cannot act more consistently than to retard the growth of his plants, rather than to encourage it by undue means. I cannot, by any exercise of my mind, conceive why such an opinion should have rooted itself so firmly in the minds of many eminent planters, as, that young oaks will not live in "the Land of the Oak," without sheltering them, almost to suffocation, with larch, Scotch pine, and spruce fir. That the progress of an oak plantation will be slower without shelter, I readily grant; but this I am foolish enough to think an advantage of considerable magnitude, when durability of timber is the object in view. Let me not be understood as deprecating the use of shelter altogether: it is not the use, but the abuse, of shelter that I denounce. It may be said, that between no shelter at all, and the abuse of it, where and how is the medium to be found? Truth generally exists between two extremes; one extreme is, that of no shelter at all; and those of your readers who feel interested in the question, and who have access to Cruickshanks's *Practical Planter*, will find the other, if they turn to p. 221. of that work; where we are informed that the plants (Scotch pine and larch) are to be put in at the distance of 4 ft. from each other; that no oaks, or rather acorns, are to be planted until the Scotch fir and larch shall have risen to the height of about 4 ft. from the ground; when they will be in a condition to afford complete shelter to every thing lower than themselves. To attain this size, they will require from four to seven years, according to the quality of the soil." By the way of encouraging this practice, he adds, in p. 224., that "young oaks, thus sheltered from the outset, will make more progress in five years, than unsheltered ones will do in ten years." I think this somewhat doubtful: but, be that as it may, I deny that the quality of the wood in the one case can be any thing like equal to that in the other; for, as oak grown in milder climates is admitted to be possessed of less durability than oak grown in the mountains of Scotland and Wales, the same results must ensue, if by extreme sheltering we shall assimilate the temperature of those last-mentioned parts to that of the former.

It is useless to talk of the deleterious effects of spring and autumnal frosts upon young oak plants: this last spring the frost was severer towards the middle and latter end of May, than we have experienced these some years past; the two years' seedling larches suffered a little in consequence, but not a single oak was injured, although I observed the half-expanded foliage of several young oak quarters white with the hoar-frost. Now these, I presume, were preserved by their not being brought unduly into leaf; but, being only acted upon by the natural impulse, they thus acquired a sufficient degree of hardiness as they advanced: but, farther, the buds on the shoots of a full-grown oak tree are just as tender when about bursting forth in spring, as is the seedling when rising through the ground; yet how seldom, if ever, do we see the head of a large tree affected by frost! Can we attribute this to any thing else than to the absence of an undue excitement on the vegetative powers, such as is produced by too close shelter. To me it appears no difficult task to find the medium between the two extremes mentioned, and this medium, I conceive, Mr. Bree has struck exactly, by planting oak a few years before the nurses. A firm and perfect nucleus is thus prepared, whereon to deposit the future concentric layers of sapwood; and these in their turn will be converted into sound timber the more readily and certainly, from nature having been allowed to communicate in her own way that state of soundness to the heart wood, which is so necessary for regulating the fluid system, and for ultimately completing the vegetable structure.

When a plantation of young oaks has stood two or three years without nurses or shelter, and is found to be alive, we may consider them as having fairly established themselves in the ground. A moderate admixture of firs ought then to be introduced, in such quantity as would draw up the oak along with them, without producing an unnatural elongation of trunk; but, before Mr. Bree's system of treatment can be acted upon with safety, I am of opinion that the plants will require to be raised on principles somewhat different from those commonly acted upon at present.

Had your pages permitted, I should have added a few hints on the treatment of plants, intended to be put out without nurses; the age and size, method and time of pit-making, &c., but this I shall reserve for a future communication. — *James Munro. Brechin Nursery, June* 16. 1834.

The Influence of the Stock on the Scion. — You doubted the fact of the shaddock becoming sweet, when engrafted on a sweet orange; or rather hinted at the improbability of a union between two trees so opposite in their genera; and declared the impossibility of the orange becoming red, when engrafted on the pomegranate of Malta. Facts of the union of trees quite as dissimilar as the above are on record, and, I presume, the authorities on which they are related will not be impugned. I met with them four years since. "A large green plum, grafted on the stem of the long black fig, succeeded at Rome." (*Letter of John Ford to Mr. Ellis. Linnæan Correspondence*, vol. iii. p. 64.) "The Chionánthus virgínica was successfully grafted upon the common ash, a tree of the same natural order with itself, but not of the same genus." (*Sir J. E. Smith. Linnæan Correspondence*, vol. iii. p. 454.). — *J. M. Philadelphia, May* 11. 1834.

Our correspondent alludes to the following paragraph, which appeared on the wrapper of our 45th Number: — "An American correspondent would be glad to be informed in what work (for he thinks he has seen it somewhere) it is stated, that 'a shaddock engrafted on a sweet orange stock will become sweet; and that the orange, grafted on the pomegranate at Malta, gives fruit that is red inside.' Of course, the last is impossible, and the first improbable; but the object is merely to ascertain where the statement is made."

It will be seen that our correspondent is mistaken, in thinking that we "hinted at the improbability of a union" between the shaddock and the sweet orange; or that we considered them as two trees "opposite in their genera." We only hinted at the improbability of the one becoming sweet when grafted on the other; and we did doubt this, and still do so; because there are very few instances indeed where grafting has this effect. The only analogous cases that we can, at this moment, recollect, are those of the influence of thorn and quince stocks in rendering the fruit of some sorts of pears, when grafted on them, gritty. Perhaps this is merely the result of the stunting or dwarfing, which is produced by such unions. There is, too, in our VIII. 743., a statement of the effect of other stocks upon pears. As to the plum grafted on the fig, and succeeding, we have no hesitation in saying that the thing is impossible, notwithstanding the authority adduced. The probability is, that Mr. Ford was imposed on by some of the quacks' grafts (*greffes des charlatans*, Thouin), formerly very common on the Continent. The shoot of a plum was probably drawn through the hollowed stem of a fig, in the same manner as the jasmine, the rose, &c., are drawn through the stem of the orange. (See *Encyc. of Gard.*, new edit., § 200.) There is nothing remarkable in Chionánthus succeeding on *Fráxinus*, or on any of the *Oleàceæ*; but we do not see in what manner that fact applies to our statement, the pomegranate not belonging to the same natural order as the orange. — *Cond.*

Aponogèton distàchyon hardy. — Observing that you state that, amongst the stove plants which you saw at Mr. Knight's nursery, in the King's Road, there was Aponogèton distàchyon, I beg leave to say this plant is perfectly hardy. I have it growing in a pond in the open air: it blooms very freely most part of the year, and ripens its seeds, which vegetate within 48 hours after they are sown. My strongest plants are those which are self-sown at the bottom of the pond, which is 4 ft. deep. I planted, only three years ago, two small bulbs, and now I am frequently obliged to destroy considerable quantities of it. I find it grows abundantly in the ponds of the botanical gardens both of Edinburgh and Glasgow. I consider it one of the most desirable aquatics I cultivate, it being seldom out of bloom, except about midsummer, and a few weeks afterwards. The last winter being mild, it flowered almost every day. — *Wm. Kent. Bath, July* 11. 1834.

We thank Mr. Kent for this information, and much wish he would oblige our readers with more of the fruit of his great experience in the culture of aquatic plants. His rich and interesting collection of them in his garden at Clapton is well remembered by many who had the pleasure of seeing it from time to time. We were in part aware of the comparative hardihood of the Aponogèton, but not that it is quite hardy. — *J. D.*

Taking up the Roots of the Scarlet Runners in Autumn, and replanting them in Spring. (p. 315.) — I have practised this mode of culture for some years. When the frost destroys the leaves and shoots, I take up the roots, keep them in sand through the winter, and replant them in May. They grow stronger, and begin to flower much earlier than beans planted in the common way, and never stop bearing till the frost destroys them. I have not set the plants more than one year, but a friend of mine has a plant six or seven years old, which looks as well now as it did the first year; and he has also a row now in pod, which were not either taken up or covered last winter. — *N. S. N. Nottingham, July* 4. 1834.

I took some Slips from my old Cauliflowers, and set them with my autumn plants; and, as they have this spring produced very fine heads, I intend to continue the practice. — *Id.*

We should be glad to hear frequently from this correspondent, who has doubtless excellent ideas and practices to communicate. — *Cond.*

Art. V. Queries and Answers.

Destroying the Red Spider (*A'carus telàrius*). (p. 289.) —If J. B. W. will use the following compound, he will find it completely eradicate those unwelcome visiters the red spiders, without in the slightest degree disfiguring or injuring any part of vegetation to which he may think proper to apply it. To each of four gallons of clean rain water, heated to about 100° Fahrenheit, add a small tea-cupful of soft soap, stirring and mixing both well together. Then apply it with a syringe, in the same manner, same proportion, and about the same time as water is generally supplied; that is, well drench, between five and six o'clock in the afternoon, every part that is in the least infested, or likely to be so, and repeat the operation three successive afternoons; the fourth, instead of the nostrum, use clean water. Then again the nostrum for three successive afternoons, using on the fourth clean water, and so on; recollecting never to syringe with clean water on any of the days that the nostrum has been used; nor with the nostrum on any of the days allotted for clean water. I have invariably found that nine syringings with the mixture totally destroyed every appearance of the insects, and have never found them make their appearance during the season after its application. It will be perceived, by a minute inspection, after the first two or three syringings, that the foliage has assumed what botanists would call a "slightly glaucous" appearance. It is this glaucous appearance which baffles every effort of the insect; as every leaf and branch is thinly coated over with soft soap, yet so thinly that in vegetation there is no perceptible difference. The object of syringing with clean water every third day is to remove the glaucous appearance, and allow vegetation twenty-four hours' respite; which enables the plant to sustain, without the slightest perceptible difference, the next three dressings with the nostrum. Were the glaucous appearance not removed at the specified time, but the nostrum continued for four, five, or six times, the foliage would get so over-coated, that a very perceptible difference would directly show itself; and the leaves would assume a brown unhealthy appearance: the washing every third day (using a plentiful supply of clean water) quite prevents this. — *Abdalonymus. July* 7. 1834.

Destruction of the Red Spider; in answer to J. B. W., p. 289.—Make a tablespoonful of sulphur into a paste, and afterwards put it into a large pot full of water. The sulphur should be in such proportion to the water as to make the latter yellow. Syringe the leaves with this mixture two or three times in the course of a fortnight, adding a little more sulphur each time. The spider will soon bid you farewell. — *P. Davis. Upton, near Stratford, Essex, June* 24. 1834.

Vitality of the Silver Fir. — Has any one of your correspondents observed the stump and roots of this tree alive for a number of years after the tree was felled? M. Dutrochet says that the stump and roots of the silver fir (*A'bies Pícea*) continue to live, and even to grow, during a great many years. He observed, in the forests of the Jura, that all the stumps of the silver fir, the branches of which had been many years felled, were still vigorous as well as the roots; while the stumps and roots of the Norway spruce, in the same forest, were all dead, including even those which had been recently felled. Stumps of silver firs which had been felled forty-five years were still full of life. — *J. W. L.*

The Weeping Ash (IX. 596., and X. 180.) is purely a seminal variety. This I have long since proved. About ten years since, twenty thousand seedlings, from a fine old weeping tree in the nursery, were planted in the same quarter with twenty or thirty thousand common ash seedlings. I was much interested in the experiment; but, on carefully watching their growth, the only peculiarity I remarked was their being rather more vigorous in habit, and, if possible, more straight in their stems: not one showed the least inclination to copy its humble progenitor. — *T. Rivers, jun. Sawbridgeworth, May* 23. 1834.

Art. VI. *Covent Garden Market.*

	From			To		
	£	s.	d.	£	s.	d.
The Cabbage Tribe.						
Cabbage, per dozen:						
White - - - -	0	0	9	0	1	3
Red - - -	0	2	6	0	3	0
Plants or Coleworts -	0	2	0	0	2	6
Cauliflowers, per dozen -	0	2	0	0	6	0
Legumes.						
Peas - per sieve -	0	2	6	0	5	0
Peas - per sack -	0	7	6	0	12	0
Beans, Windsor per sieve	0	1	0	0	1	3
Beans, Windsor per sack	0	3	6	0	5	0
Tubers and Roots.						
Potatoes - per ton	5	0	0	7	0	0
Potatoes - per cwt.	0	5	0	0	7	0
Potatoes - per bushel	0	2	6	0	3	6
Turnips, White, per bunch	0	0	2	0	0	4
Carrots, per bunch:						
Young - - - -	0	0	8	0	1	0
Horn - - - - -	0	0	6	0	0	8
Red Beet, per dozen -	0	2	0	0	0	0
Horseradish, per bundle -	0	2	6	0	5	0
Radishes, per bunch:						
Red - - - -	0	0	1	0	0	0
White Turnip - -	0	0	1½	0	0	0
The Spinach Tribe.						
Spinach per sieve -	0	2	0	0	0	0
Spinach per half sieve -	0	1	6	0	0	0
Sorrel, per half sieve - -	0	1	0	0	0	0
The Onion Tribe.						
Onions, green, per bunch -	0	0	2	0	0	4
Leeks, per dozen bunches -	0	4	0	0	0	0
Garlic, per pound - -	0	0	6	0	0	8
Shallots, per pound - -	0	0	8	0	0	10
Asparaginous Plants, Salads, &c.						
Artichokes, per dozen -	0	3	0	0	4	0
Lettuce, per score:						
Cos - - - -	0	0	6	0	1	6
Cabbage - - - -	0	0	6	0	1	0
Celery, per bundle (12 to 15)	0	1	0	0	1	6
Pot and Sweet Herbs.						
Fennel, per dozen bunches	0	3	0	0	0	0
Thyme, per dozen bunches	0	3	0	0	0	0
Sage, per dozen bunches -	0	2	0	0	0	0
Mint, per dozen bunches -	0	2	6	0	0	0
Peppermint, per doz. bunches	0	1	6	0	0	0
Marjoram, per dozen bunches	0	3	0	0	0	0

	From			To		
	£	s.	d.	£	s.	d.
Savory, per dozen bunches -	0	3	0	0	0	0
Basil, per dozen bunches -	0	4	0	0	0	0
Rosemary, per dozen bunches	0	6	0	0	0	0
Lavender, per dozen bunches	0	3	6	0	4	0
Tansy, per dozen bunches -	0	1	6	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Rhubarb Stalks, per bundle	0	0	9	0	0	0
Angelica Stalks, per pound	0	0	6	0	0	0
Vegetable Marrow, per dozen	0	0	9	0	1	3
Capsicums, per hundred -	0	2	0	0	3	0
Edible Fungi and Fuci.						
Mushrooms, per pottle -	0	1	0	0	1	6
Morels, dry, per pound -	1	0	0	0	0	0
Truffles, English, per pound	0	14	0	0	0	0
Fruits.						
Apples, Dessert, per bushel:						
White Juneating - -	0	5	0	0	6	0
Red Juneating - -	0	5	0	0	6	0
St. Julien - - -	0	8	0	0	10	0
Baking - - -	0	3	6	0	5	0
Peaches, per dozen - -	0	15	0	1	5	0
Nectarines, per dozen -	0	15	0	1	10	0
Apricots, per dozen - -	0	2	6	0	6	0
Almonds, per peck - -	0	7	0	0	0	0
Plums, Dessert, per punnet	0	2	0	0	2	6
Green gages - - -	0	2	6	0	3	0
Cherries, per pound -	0	0	2	0	0	6
Bigarreaus - - -	0	1	0	0	1	6
Currants, per sieve:						
Black - - -	0	5	0	0	6	6
White - - -	0	5	0	0	6	0
Red, for wine - -	0	7	0	0	8	0
For tarts - -	0	7	0	0	8	0
Dessert, per half sieve	0	4	6	0	6	0
Raspberries, Red, per gallon (2 pottles) - - -	0	0	9	0	1	6
Pine-apples, per pound -	0	4	0	0	7	0
Hot-house Grapes, per pound	0	3	0	0	5	0
Melons, each - - -	0	2	6	0	5	0
Cucumbers, frame, per brace	0	0	9	0	1	0
Oranges per dozen -	0	0	9	0	2	6
Oranges per hundred -	0	6	0	0	18	0
Lemons per dozen - -	0	0	9	0	2	6
Lemons per hundred -	0	6	0	0	18	0
Sweet Almonds, per pound	0	2	0	0	2	6
Brazil Nuts, per bushel -	0	16	0	0	0	0
Spanish Nuts, per peck -	0	4	0	0	0	0
Barcelona Nuts, per peck -	0	5	0	0	0	0

Observations. — From the continuance of fine and warm weather during the last month (with an occasional shower) until Saturday last, our market has been regularly supplied with fruit in abundance, and in most excellent condition. The prices of most articles have been good, cherries excepted, which have been very reasonable. Currants are now coming to hand in fine condition for wine or preserves; gooseberries also are in excellent state for the same purposes; we have a few jargonelle and other pears, but the crop is very short; of plums and green gages some few from the walls, the general crop is altogether a failure; the report of wall fruit is generally bad, except grapes, which will be plentiful. The recent rains have improved the prospect of autumn and winter crops, so that I have no doubt we shall have an abundant supply of turnips, coleworts, savoys, and other articles. At present we have plenty of summer cabbage, French and scarlet beans, with some turnips and fine carrots from Bedfordshire. The supply of early potatoes has been as yet very deficient in quantity, with little prospect of any material improvement from the immediate neighbourhood of London, whence we are at present supplied, but the later crops will be materially improved by the recent abundant rains. — *G. C.* *July* 22. 1834.

ART. VII. *London Horticultural Society and Garden.*

JUNE 17. 1834. — *Exhibited.* Roses, pelargoniums, and heartseases, from Mrs. Lawrence. Pinks and carnations, from Mr. Hogg, Paddington. Pinks and sweetwilliams, from Mr. Kirke, Brompton. Yellow roses (double), from Mrs. Meyer. Cypripèdium spectábile, pubéscens, and parviflòrum, and *L*ílium spectábile, from Messrs. Chandler.

Also, from the Garden of the Society. Gíl*ia* tricolor, Fúchs*ia* Thompson*iàna*, *L*ílium japónicum, *L*upìnus álbifrons, &c.; Cýcnoches Loddigès*ii*, hybrid gladioluses; Pentstèmon spléndens, speciòsus, &c.; *Pæònia* albiflòra Hùm*ei*, *C*aprifòlium flexuòsum, Psoràlea glandulòsa, Silène compácta, and flowers of other plants; Tilgner's red-heart cherry; Buck's seedling pine-apple No. 2.

July 1. — *Exhibited.* Drawings of heartseases, by Mrs. Withers. Stanhòpe*a* oculàta, from J. Bateman, Esq. *H*elichrýsum sp., from W. Wells, Esq. Specimen of a garden-pot, from T. C. Palmer, Esq. *A*cánthus spinòsus, from Mr. J. Kirke. A stand of carnations, heartseases, and roses, from Mr. Hogg. Ròhde*a* japónica, from J. Reeves, Esq. A stand of flowers of georginas, from Mr. Glenny.

Also, from the Garden of the Society. Manétti*a* cordàta, Sólly*a* heterophýlla; *V*erbèna, four kinds; Quisquàlis índica, Calceolària viscosíssima, Galèga bíloba, *M*álope grandiflòra, roses, pentstemons, *S*piræ`a *a*riæfòlia, and flowers of other plants. Cherries: The Elton, Downton, Black eagle, Bigarreau couleur de chair (flesh colour), Red heart, Belle de Choisy, Hybrid (between Waterloo and Mayduke). Strawberries, the Elton seedling.

July 15. — *Read.* Remarks upon the Causes of the Diseases and Deformities of the Leaves of the Peach Tree; by T. A. Knight, Esq.

Presented. No. xxxiv. of the Pomona Italiana; from the Marquess of Bristol.

Exhibited. *R*òsa microphýlla, from E. Johnstone, Esq. Magnòl*ia* grandiflòra, and White juneating apples, from Mr. J. Kirke. Vines in pots, from Mr. Mearns.

Also, from the Garden of the Society. Flowering specimens of Calceolària viscosíssima, Gesnèr*ia* rùtila, Quisquàlis índica, Manétt*ia* cordàta, Justíc*ia* cárnea; Alstrœmèr*ia* hirtélla, aúrea; *C*aprifòlium japónicum, Anomathèca cruénta, Clárk*ia* elégans, Stenáctis speciòsa, Gíl*ia* tricolor, *A*ntirrhìnum màjus flòre plèno; *L*upìnus álbifrons, ornàtus; *Petùnia* phœnícea and var., *Màdia* elégans, Escallòn*ia* rùbra, and a white-flowered kind; *S*piræ`a *a*riæfòlia, *R*esèda odoràta var. crassifòlia, *C*atanánche cærùlea var. bícolor, Coreópsis lanceolàta, Cladánthus arábicus; *M*álope *m*alacoìdes, grandiflòra; *Œ*nothèra speciòsa, macrocárpa, anisóloba, Pentstèmon pulchéllus, hýbridus, rùber; Macleày*a* cordàta, Coronílla vària, Potentílla Hoopwood*iàna*, *V*erbèna *c*hamædrifòlia, Psoràlea glandulòsa, roses, georginas, hollyhocks. Cherry: Bigarreau Napoleon. Gooseberries: Woodward's whitesmith, Pitmaston's green gage, Taylor's bright Venus, Red Turkey, White Champagne, Red Champagne.

The Exhibition at the Chiswick Garden, held July 5., was still more numerously attended than the previous ones, there being present 3076 persons, notwithstanding the attraction of the queen going down the river to embark for Germany, attended by a numerous body of courtiers, which must have drawn " some souls another way." The stage of exhibition was seen to greater advantage than on any former occasion, in consequence of a passage round it being railed off, with openings at each end and in the centre of each side for ingress and egress. This arrangement admits of some improvement, which will no doubt be made; and, when it is perfectly satisfactory, we shall give a ground plan of it, for the benefit of other societies who have similar exhibitions.

The next thing which we should like to see attempted by the directors of those shows would be a classification of the articles exhibited. We would place all the fruit on a part of the stage by itself; all the florists' flowers by themselves, all the roses by themselves, and so on. This would not interfere with miscellaneous collections of plants in pots, which might be still kept in groups, as they are at present. We should also like to see culinary vegetables of every description exhibited, and, of course, they ought to be shown in a separate tent. Indeed, we are persuaded that these exhibitions will soon become so popular, that the present tent, large as it is, will not be able to contain the articles sent, and it may then be devoted exclusively to miscellaneous assemblages of plants in pots, while separate tents will be required for florists' flowers, fruit, and culinary vegetables. There is plenty of room for such tents, and they might be made of a circular form, and wholly supported by an iron column in the centre, somewhat in the manner of fig. 630. in the new edition of our *Encyclopædia of Gardening*, but with a curtain all round.

We should also wish to see a rigid attention paid to classification in the collection of cut flowers, such as roses, heartseases, carnations, &c. By neglecting to place varieties of the same flowers together, according to their affinities, the florists really do themselves an injustice. For example, in the way hearteases are at present exhibited, the varieties are all indiscriminately mixed together; so that, in casting the eye over them, it is impossible to say how far they are distinct from each other. Now, were each variety placed adjoining to that which it most resembled in the greatest number of particulars, the eye would begin at one end of the collection, and trace a beautiful series of harmonious variation to the other end of it. There is not one well-constituted mind in a thousand, to which this mode of exhibition would not be incomparably more agreeable than the present chaotic one. We believe that one of the objects of the exhibitor at present is sometimes to puzzle the spectator, and to prevent him from knowing how many distinct sorts are exhibited. If this be desirable in a commercial point of view, it is most detestable in point of taste; for, in small things, as in great ones, "order is heaven's first law." Why is it "heaven's first law?" Because, wherever a number of particulars are presented to the mind, they cannot be comprehended by it, unless they are connected by some obvious principle, so as to form a whole. Wonderful as the powers of the human mind are, it can only attend properly to one thing at one time. From this principle within us arises the necessity of order and classification in all things around us, from which we expect to derive either instruction or delight. (See the subject of unity of sensation treated more in detail in our *Architectural Magazine*, vol. i. p. 219.)

The articles which appeared to us the most remarkable in the exhibition were Rhodochìton volùbilis, which had flowered in the stove of Mrs. Lawrence; Campánula gargánica, mentioned p. 340., from the garden of Mrs. Marryat; dotted-flowered balsams, from Mrs. Lawrence; balsams very prolific in flowers relatively to the number of their leaves and the strength of their stems, from the garden of Gunnersbury House, by Mr. Mills; very fine carnations and picotees, from Mr. Hogg; and remarkably large grapes and red currants, from Mr. Wilmot of Isleworth. There were, also, a new seedling white grape, without stones; vines in pots with several bunches of grapes on each, the plants being raised from cuttings put in in the spring of last year; and a pot with several bunches, produced by the coiling system (described p. 138.), by Mr. Mearns. Perhaps, after all, the most interesting and most valuable articles exhibited were the very large red currants, raised by Mr. Wilmot.

The gold Banksian medal was awarded: 1. To Mr. John Wilmot of Isleworth, F.H.S., for grapes; 2. To Mrs. Lawrence, F.H.S., for a miscellaneous collection of plants; 3. To Mr. Rivers of Sawbridgeworth, for China and noisette roses; and, 4. For garden roses, to Mr. Stephen Hooker of Brenchley (near Lamberhurst), F.H.S.

The large silver medal was awarded: 1. For a miscellaneous collection of plants, from Mr. John Green, gardener to Sir Edmund Antrobus, Bart. F.H.S.; 2. For miscellaneous fruits, from Mr. Geo. Mills, F.H.S., gardener to Alexander Copland, Esq. F.H.S.; 3. For pelargoniums, from Messrs. Colley and Hill of Hammersmith; 4. For georginas, from Mr. Hopwood of Twickenham; 5. For georginas, from Mr. Redding, gardener to Mrs. Marryat, F.H.S.; 6. For an Enville pine, from Mr. John Wilmot of Isleworth, F.H.S.; 7. For queen pines, from Mr. Wm. Greenshields, F.H.S., gardener to R. B. De Beauvoir, Esq. F.H.S.; 8. For melons, from Mr. John Wilmot of Isleworth, F.H.S.; 9. For peaches and nectarines, from Mr. John Mearns, F.H.S., gardener to the Duke of Portland; 10. For carnations, from Mr. Hogg of Paddington; 11. For heaths, from Messrs. Rollison of Tooting; 12. For English picotees, from Mr. Hogg of Paddington; 13. For grapes, from Mr. Turner, gardener to George Byng, Esq. F.H.S.; 14. For China roses, from Mr. Stephen Hooker, F.H.S.; 15. For miscellaneous roses, from Wm. Harrison, Esq. F.H.S.; 16. For balsams, from Mr. John Green, gardener to Sir E. Antrobus, Bart. F.H.S.; For *Helichrysum* sp., from Robert Mangles, Esq. F.H.S.

The silver Banksian medal: 1. For heartseases, from Mr. Wilmer of Sunbury; 2. For peaches and nectarines, from Mr. Bradley, gardener to the Earl of Arran, F.H.S.; 3. For cucumbers, from Mr. Seward Snow, gardener to John H. Palmer, Esq. F.H.S.; 4. For currants, from Mr. John Wilmot of Isleworth, F.H.S.; 5. For black Hamburgh grapes, from Mr. R. Clews of Acton, F.H.S.; 6. For grapes, from Mr. Andrews, gardener to R. Patterson, Esq., of Blackheath; 7. For bigarreau cherries, from Mr. Jarvis of Turnham Green; 8. For melons, from Mr. Davis, gardener to —— Strange, Esq., Upton, Essex; 9. For perpetual roses, from Mr. Rivers of Sawbridgeworth; 10. For roses, from Mr. Wilmer of Sunbury; 11. For picotees, from Mr. Wilmer of Sunbury; 12. For pelargoniums, from Mr. Gaines, Surrey Lane, Battersea; 13. For balsams, cockscombs, and georginas, from Mr. W. Cock of Chiswick; 14. For a miscellaneous collection of plants, from Mr. Redding, gardener to Mrs. Marryat, F.H.S.

Art. VIII. *Obituary.*

Died, at Armagh, June 30., aged 42, *Mr. James Elles*, gardener to His Grace the Lord Primate. Mr. Elles was a native of Yorkshire. At an early age he was sent to a grammar school, at which he read the usual course of Latin and Greek, which, in after-life, assisted in placing him at the head of his profession. He discovered an early attachment to the profession of gardening, and, being a man of studious habits, he not only became a good practical gardener, but also an excellent botanist, and a successful cultivator of flowers. He contributed, under different signatures, many valuable papers to the Gardener's Magazine, and obtained the prize offered by the conductor of that periodical, from a great number of competitors, for the best essay on "Cottage Economy." He had acquired not only a theoretical, but also a practical, knowledge of many branches of natural history, and was, we believe, the first gardener in this country who used hot water to keep up the proper temperature of hot-houses. He lived as head gardener ten years with the Marquess of Bath, and upwards of four years at Armagh. In him society has lost a valuable member, and His Grace has lost a servant of sterling honesty and integrity, one whom it will be a most difficult matter to replace. He bore a lingering illness with Christian resignation, and died in the full hope of enjoying a happy eternity through the merits of our Lord and Saviour Jesus Christ. He has left a disconsolate wife and four children to lament his loss. (*Newry Commercial Telegraph*, July 8. 1834.)

We can add our testimony to the great moral worth and high professional eminence of Mr. Elles, the loss of whom we deeply deplore. We sincerely hope that the archbishop whom he has served will act the part of a Christian, and be a benefactor and protector to his widow and children. — *Cond.*

THE
GARDENER'S MAGAZINE,
SEPTEMBER, 1834.

ORIGINAL COMMUNICATIONS.

Art. I. *Notes on Gardens and Country Seats, visited, from July 27 to September 16., during a Tour through Part of Middlesex, Berkshire, Buckinghamshire, Oxfordshire, Wiltshire, Dorsetshire, Hampshire, Sussex, and Kent.* By the Conductor.

(*Continued from* p. 259.)

Tottenham Park, Marquess of Aylesbury.—Aug. 16. This is an immense place, of which we had heard much; and while, in its immensity and in the general management of the estate, it exceeded our expectations, in its architecture and gardening, which we had heard most praised, it fell short of them. The estate consists of 60,000 acres in a ring fence, one half of which, we suppose, may consist of the ancient forest of Savernake, said to be the largest in Britain in the possession of a private individual, with the house in the centre. Fifteen years ago, the stewardship of this estate fell into the hands of Mr. Iveson, who has effected the most extraordinary improvements and ameliorations, seconded by the marquess, who is one of the best of landlords and masters. When Mr. Iveson came into charge of the property, none of the cottages on the estate had gardens attached to them, and the labourers were in the most wretched condition of any in this part of England. They are still bad enough, in more than one sense of the word; their wages being made up out of the poor's rate (a system which the magistrates of the county, we were informed, have not the courage to break through): but, in consequence of every cottage, without exception, having had a quarter of an acre of land attached to it, the dwelling itself having been put in repair, and, when necessary, enlarged so as to consist of four rooms with lean-tos, &c., they are in a state of great comparative comfort and happiness. Mr. Burns, the well-known, and, we may say, celebrated gardener, at Tottenham Park, propagates 300 apple trees yearly, to distribute among them; and supplies them with cuttings and seeds of whatever he thinks will be either useful or ornamental in their gardens. For all repairs, and for such additions as they may choose to make, Mr. Iveson and his under stewards allow them rough materials to any extent for nothing. The walls of these cottages are of brick, or of cob, built in the manner described in our *Encyc. of Cott. Arch.*, § 838. to § 842., and their covering is almost invariably thatch. The cottage and land, with all these advantages, are let at 2*l*. a year, and every cottager comes to the mansion to pay his rent twice a year, when he has what is, for him, a sumptuous dinner, and abundance of ale, or, as it is called in Wiltshire, strong beer. In consequence of this treatment, they have become quite a different people. There are now three schools for twenty girls each, where before there were none; but in this respect improvement has not been carried half far enough. We heard of no boys' schools, and we were informed that very few labourers on the estate could read. The cottagers, some years ago, used to live chiefly on bread and water; but now every married man keeps a pig; all grow potatoes and other vegetables in their own gardens; and many brew their own beer. Several of them have expressed to Mr. Stanley, the marquess's wharfinger, their astonishment how they could live at all, either in their former houses, or on their former diet.

All the farm lands on this estate are held at will, at very low rents, and without any restrictions as to cropping; but they have, with scarcely any exceptions, been in the same families for generations. The land is good, and, for the county, well cultivated; and the farmers, with scarcely a single exception, are rich. The farm houses were formerly situated in the villages; but they have been removed and rebuilt by Mr. Iveson, in situations central to the lands, and on improved plans. The hedges and roads have also been altered and improved throughout the whole estate; and the hedges are managed in the Northumberland manner, so admirably, that the boundaries of the estate may be discovered by them. We recognised the change at once in coming along the Bath road from Hungerford. In the home farm, admirably managed by Mr. Unthank from the county of Durham, the Berwickshire system of growing turnips on raised drills is exhibited, and it has been already followed by some of the tenants. Mr. Unthank has also got a Finlayson's harrow, an implement calculated to save an immense deal of labour in this as well as in most other parts of the country. The farmyard here is good; as is also that for poultry. The pigeon-house, built in a circular form, and entirely of brick, with the cells in the walls, formed by courses on edge, alternating with others flat, proper openings being left, and projecting bricks for the birds to perch on being introduced, is a model of beauty. Mr. Unthank's house, the carpenter's house, and the poultry-man's house, form a line of detached villas, which, if near London, would be considered as fit for respectable merchants or private gentlemen. Mr. Iveson's house is a villa on a larger scale, with a very handsome lawn, tastefully varied and decorated by Mr. Iveson himself. It is on the margin of the park; and, by concealing the separating fence, it might be made to appropriate, as its own, a considerable breadth of the park scenery. — So much for the extent of this estate, and its general management; we shall now turn to the park, and the house and gardens.

The park may be described as an interminable oak forest, on a surface which, taken as a whole, may be considered flat, but which, in particular places, exhibits undulations. This forest is crossed at right angles by two avenues, one above eleven miles long, which intersect each other in the centre, at which point of intersection is placed the house. A stranger can form no idea either of the extent of the park or of the length of the avenues; so that to him the characteristic of the place is interminableness. Besides these principal avenues, there are innumerable subordinate ones, many planted with beech trees, and others cut out of the forest and bordered by the native oaks and birches. There is one master avenue, or rather grass drive, which makes a circuit of the entire forest, and which is 25 miles long. From one front of the house one of the straight main avenues is distinguished passing over a swell, at the distance of seven miles. By way of distinguishing the 25-mile avenue, we have suggested to Mr. Burns the idea of planting an arboretum along it, of such trees and large-growing shrubs as are perfectly hardy; and adjusting the distance so that they shall extend over the whole 25 miles. This idea, properly developed, would produce something unique, and worthy of such a place as Tottenham Park. Mr. Burns took us extensive drives in all directions; but, for want of distant prospects, and water, we cannot say that we met with any striking views. Indeed, we felt a degree of sameness, perhaps increased by the impression, still vivid in our minds, of High Clere. In the bottom of one quiet valley is Savernake Lodge, a small villa, intended for the eldest son of the family when he marries, with grounds about it very neatly laid out, and well kept. Here the children of the present marquess were nursed up by Mrs. Morgan, the present housekeeper, and each child had its garden. These gardens still exist, and appear like little islands in a sea of turf. They are surrounded by hedges, and are still kept up with great care and taste, under the direction of Mrs. Morgan.

The mansion strikes a stranger as being placed in a low situation, as the grounds rise slightly from it on every side. It was originally, we believe, designed or built by Lord Burlington, in the Palladian style of course, with a centre, and two wings joined by segmental corridors; a most unsuitable style, according to modern ideas, for a baronial residence in the centre of an ancient forest. This house has for some years past been undergoing renovations, and receiving additions in the same general style; but we regret to say that we never in the whole course of our observation met with any thing more unsatisfactory, either exteriorly or within. The chief fault lies in the works having been begun apparently without any general plan. In whichever way the exterior elevation is viewed, it is without grandeur; and within there are some parts, such as the hall, plainly finished even to meanness, and lighted by sloping sashes, exactly like those of a hot-house; and some small rooms finished in the most gorgeous style, with the most elaborate inlaid floors of different-coloured woods, and carved doors and wainscoting, and highly enriched cornices and ceilings. There is no large room yet finished; the walls of the library are built, but those of the dining-room are not commenced, and, in our opinion, they never should be, for it is beyond the power of man to make a good whole of this house. The principal bedrooms not only have low ceilings, but, to aggravate this evil, the windows do not reach to above two thirds of their height, so that they never can be properly ventilated. The small size of the windows, also, makes the rooms appear gloomy and dark, and this, contrasted with their gorgeous French furniture, gave us more the idea of princely tombs (such as we have seen in the vaults of Petersburg and Königsberg, covered with rich furs and velvet, and with a profusion of gilding), than of cheerful sleeping-rooms. There is nothing that takes away from the idea of habitableness and enjoyment so much as overlaying things with ornament. Coming out of these rooms, one is really quite astonished at the meagre finishing of the hall and principal staircase. There is a wing containing a Doric conservatory, the columns hollow, and their flutings filled in with glass; the triglyphs and other parts of the frieze are also filled in with glass: conceits most unhappily at variance with Doric simplicity and elegance. Adjoining this, but not joined to it, and evidently an after-thought, is an architectural orangery with an opaque roof, higher than the other, and sufficiently discordant with it to harmonise with the rest of the place. It is not yet finished, and, were it not for the sake of Mr. Burns's fine orange trees, we should be tempted to wish it never may. There is a terrace connecting these appendages with the main body of the house, from which a flight of steps descends to the flower-garden.

We refer our readers, for the plan of this garden, to VII. 138.; in which they will find the forms of the beds, and the plan and position of the terrace and orangery just mentioned.

When we saw the forms of these beds on paper, we were at a loss to conceive the reasons which induced the artist to adopt them, as they had evidently no relation to the lines of the walks. We said nothing, however; thinking that there might be some inequalities in the ground, or some existing trees, or rocks, which might justify their adoption. The grounds, however, are quite flat, and without a single tree; and, therefore, we do not hesitate to pronounce the whole to be laid out in bad taste. Our readers will understand the reasons on which this opinion is founded, if they will turn to VII. 401., and VIII. 86, &c. There is an American border adjoining the flower-garden, and marked *g* in the plan (fig. 16. VII.). This border is parallel to, and partly under, a double row of very large beech trees; and, as it rises from the walk to the height of between 2 ft. and 3 ft. above the level of the surface towards the trunks of the trees, it has a very bad effect. We will not say that this is a matter of taste, in which two persons may differ, and neither be in the wrong. No; it is a matter of truth and nature. It never can be true to nature to see large old trees with their trunks apparently earthed up; and it is equally as injurious to their growth as it is unpleasant to the eye. There is something, too, exceedingly circumscribed in the idea of making a shrubbery border under the shade of high trees; more especially a peat border, which ought always to be more or less moist. By management of this sort, the grandeur and dignity of the large trees are injured, and the border is prevented from attaining the end in view. There is nothing more contrary to nature, yet less consistent with the characteristics of art, than the sight of a tree, with the base of its trunk either really or apparently clogged up with earth. The grandeur and dignity of a tree depend mainly on its rising up boldly, with the base and part of the trunk exposed, from a naked surface: rising out of a mound of earth, or out of a clump of bushes, with the trunk concealed, it can only be considered as an immense bush.

There are other parts of the adjoining grounds laid out in flower-beds, with a magnolia wall, and a walk by a sunk fence with a rhododendron border; but these details are not so connected as to form an impressive whole. In short, there is an utter want of unity of design in the garden scenery as well as in the house. There is, however, one thing, which it would be the greatest injustice to Mr. Burns not to bring forward in a prominent manner, viz., the excellence of the culture, and the good order in which everything is kept. The place abounds in hybrid rhododendrons and azaleas; and the flower-beds are filled with choice plants, most beautifully in bloom. We have noted down numerous fine specimens, but fear we should fatigue our readers by giving their names and dimensions, and, what is of far more consequence, the very few years that they have been planted. We must, however, notice an azalea, forming a bush 15 yards in circumference; and a kalmia, nearly as large, and 6 ft. high. Magnòl*ia* grandiflòra and M. conspícua make shoots here from 18 in. to 3 ft. long every year. The magnolia wall will probably soon be the finest thing of the kind in England, not even excepting that at White Knights. There is a fine Cunninghàm*ia* here, between 14 ft. and 15 ft. high; perfectly hardy, and very handsome. There is a large Magnòl*ia* glaúca, raised from seed ripened at Wasing House, Berkshire; an oak-leaved Hydrángea, remarkably large; several camellias, both as standards and trained against a wall, growing freely and flowering beautifully; an Eriobòtrya and Photínia, high, bushy, and vigorous; with a remarkably large and handsome variety of tree lupine, which we should wish to see in the nurseries; in which opinion we are sure we shall be seconded by so generous and liberal-minded a man as Mr. Burns. In short, in the culture of the garden, and in the execution of the carpentry and masonry of the house, there is scarcely any thing but what is deserving of the highest commendation. The inlaid floors are by Mr. White, whose plan is described and figured in our *Encyc. of Cottage Arch.*, § 2010.; and the masonry and carving in stone are by a local mason of great talents, whose name we regret we have not taken down.

The kitchen-garden contains many points of excellence. Here is one of the best peach-walls which is to be seen any where, at this time finely covered with fruit and wood; so much so, indeed, that hardly a brick of the wall is to be seen. We have heard several gardeners declare this to be the best peach-wall in England. Behind part of this wall, Mr. Burns keeps his stock of tree leaves for his pine-pits; and, by the fermentation and heat, they bring forward the trees so as to ripen their fruit three weeks earlier than those on the common wall. The pines are remarkably well grown; and Mr. Burns has cut one as heavy as 13 lbs. The Tottenham Park Muscat grape is well known and highly esteemed; the original plant fills a whole house, and bears well every year. Cherries are here grown in peat, and found to thrive well in that soil; in the common soil of the garden they were found to gum. The substratum everywhere at Tottenham Park is chalk; and, when it is desired to drain any place, or get rid of superfluous water, all that is necessary is to dig a pit into the chalk. We must not omit to mention that Mr. Burns has a garden library for his young men.

The house-porter here, Joseph Shindle, is a remarkable instance of the force of native genius. In spite of his morning duties of wheeling in coals and wood, and wheeling out ashes and dirt, he has contrived to make a number of curious sundials and barometers; and to paint several pictures of fruits and flowers, and make frames for them. He is an excellent cabinet-maker and joiner, and a theoretical as well as practical astronomer. He has contrived, out of his savings, to collect a tolerable library, including Hutton's *Mathematical Dictionary* in quarto.

There is one fine circumstance connected with Tottenham Park, which deserves to be mentioned for the credit of its liberal and benevolent lord. It is open at all times to the inhabitants of the surrounding towns; who drive, ride, or make gipsy-parties in it at pleasure.

(*To be continued.*)

ART. II. *Notes made during a Professional Journey through Belgium and Part of France, for the House of Messrs. Low and Company, Nurserymen, Clapton, in March and April*, 1834. By Mr. WILLIAM GARVIE, Foreman in the Clapton Nursery.

(*Continued from* p. 362.)

ANTWERP. — The nursery gardens here are neither numerous nor of much importance. It is difficult to say who has the best. M. Moeris excels, decidedly, in camellias, which he cultivates successfully and in great quantities. He has appropriated a large house to plants of the most esteemed varieties, which are planted into the free soil; and he has, besides, a great many seedlings, from which he expects great things. One of these appeared to me to promise well; but the blossom was not sufficiently expanded for me to speak of it decidedly. Of other plants he has but few, and those are not well cultivated.

M. van Geert has commenced a promising nursery at a short distance from the town; and, from the situation of the place, and the apparent spirit of its occupier, I have little doubt that it will succeed well. The general stagnation of trade in this quarter, at the time of M. van Geert's commencing, gave him a severe trial; but, since peace has been restored, he finds things going on more favourably.

There are also many market-gardens; but, like those of Ghent, little or no taste is displayed either in the laying out or the keeping of them.

There is a botanic garden at Antwerp; but it is very small. It contains several small plant-houses, principally for tropical plants, which are generally in very bad condition. There are, however, some good specimens of those species of plants which have been long introduced to the collections of Europe; but not any of the newly introduced ones. The green-house plants were still worse than those in the stove, if worse could be; as there was not a single plant worth anything. I was much disappointed with the place altogether, especially from its gay appearance outside; it having a fine stone parapet about 3 ft. high, surmounted with rails 10 ft. high, I should think, and gilt at the top. Something of this kind would better become a palace than a botanic garden.

As I had been but little satisfied with my morning's employment, I next directed my course to the château of M. Parthon de Von, in hopes of being better gratified; and I was not disappointed. The château lies about three miles out of the town, to the right of the Brussels road; and it is surrounded by a large ditch filled with water (a thing very common in this country), over which you pass by means of a drawbridge. There are three good plant-houses, and an orangery: one of the houses is for stove plants, of which there is a good collection; and they are well cultivated. A plan of shading the stove plants is adopted here, which I had never seen before: a sort of paint is prepared, with which the glass is painted very lightly all over; and I was informed that this thin coating gives an excellent shade in summer, and does not in the least injure the plants during winter. Whether this practice is beneficial or not, I shall not pretend to say; but I can safely assert that the plants here look as well as any plants can well look at this season of the year. The collection of *Orchídeæ* here is rather rich, and the plants are well cultivated, although many of these are small; owing, no doubt, to the liberal manner in which M. Parthon de Von exchanges with his neighbours. He has a person now in the Brazils expressly for procuring *Orchídeæ*; from whom he expects to receive considerable additions to his already interesting collection. The green-house is small; but it contains some esteemed and rare plants. The collection of hardy herbaceous plants is very extensive; although it made, at the present season, but little show. The grounds of this residence suffered much from the ravages of the French army, while encamped in this quarter, during the siege of Antwerp. M. Parthon de Von informed me that upwards of 1500 large trees had been cut down in the neighbourhood, by the army, for firewood. The roots of some of them have not yet been removed.

Madame Smeldt has a beautiful place near Antwerp, which contains several good houses for tropical plants, among which are some fine specimens of palms, though not any of uncommon species. The pine-apple is here cultivated to a considerable extent, and not without success, although the fruit is, in point of size, far inferior to that produced in England.

The road from Antwerp to Brussels leads through a beautiful agricultural country, abounding everywhere with fine large woods. The soil seems excellent, approaching, in many places, to a strong yellow loam, and capable of bearing any sort of crop. Along this road, I observed a greater number of gentlemen's seats than along any of the other Continental roads which I have yet travelled. At about six miles from Antwerp I observed, in passing, a very neat garden, with several small houses built in the English fashion: these, I afterwards learned, belong to a Mr. Fenner, an Englishman. The country, as you approach Mechlin, becomes more undulated; and, upon the top of a gentle eminence, two miles before you reach the town, the prospect before you is magnificent, and extends over the surrounding country, which you can see for several miles beyond Brussels. As you descend towards the town, you enter a noble avenue of fine elm trees, with the beautiful steeple of the cathedral, as it were in perspective, at the end. It is the finest approach to a town I have ever seen, except some of the approaches to Rouen in Normandy. Mechlin seems a place of considerable importance, and has a convenient communication with other places, by means of a fine canal which runs past it on one side, and a large river which is within about about a mile or so on the other. After leaving the town, you cross the canal, and the road beyond it lies close to its banks, nearly all the way to Brussels. The country here begins to be a good deal undulated; and many villas are placed along the roadside. Near Brussels, on a gentle eminence to the right, stands the palace of Läcken, at present occupied by the King of the Belgians. The entrance to the town itself is not good on this side, as the road lies low, and the houses are rather meanly built.

Brussels is large, and contains some good streets, especially in the neighbourhood of the park, in which stands the palace. There are some magnificent buildings contiguous to the park; and the fine iron railings and gates, being gilt at their tips, have a gay appearance. Along the principal boulevards there are some good houses, and their pleasant situation always insures their being filled with persons of rank, a great many of whom are English. The situation of the residences, from the Boulevard de Waterloo round as far as the Porte de Läcken, is by far the pleasantest I have ever witnessed: it lies very high, is open in front, and commands an extensive view of the neighbouring country.

The nursery gardens in and about Brussels are not numerous; and of these, none contain anything that is either new or rare. The market-gardens are more numerous, and supply the market with excellent vegetables, especially Brussels sprouts, which certainly are here exceedingly fine.

At a few miles from the town, there is a nursery belonging to a M. van Volexem, where there is one of the finest collections of ornamental trees and shrubs I have ever seen. The proprietor is very rich, and does not spare either trouble or expense to procure every thing that is choice and new in plants of this kind. He does not cultivate any house plants. The new botanic garden of Brussels has a very prepossessing external appearance. It stands on a gentle eminence at the top of the Boulevard de Läcken, from which it is seen to great advantage. Within it, there are, in the large stove, some fine specimens of palms; but many of them suffered severely in the late revolution; and some were entirely destroyed by the Dutch, who were in possession of the gardens and houses during the greater part of the contest. I was informed that a plant, supposed to be the finest in Europe, of the Strelítz*ia* augústa was cut to pieces by the soldiers from mischief. Among the New Holland plants, there are none of the newly introduced species: they are all of kinds long known in Europe; and, although the specimens of some of them are large, they are not at all in a good condition: they are, indeed, tall, and naked a great way up the stems, which gives them an unsightly appearance. There is an extensive collection of succulent plants, and these appear to advantage. The pine-apple is also cultivated to some extent, but not skilfully. Kidneybeans and strawberries are forced; which seems quite out of character in a botanic garden: but as these are sold, and other plants from the collection, it is possible the former produce as much profit as anything else. The grounds are extensive; and, in front of the houses, they are curiously laid out, though in a style which appeared to me much out of character, and I cannot say well executed. I was informed that the conductors of the garden have received a grant from government of a yearly sum for the improvement of the garden, and for the purchasing of new plants; and it is to be hoped that this aid, by being judiciously applied, will be made to supersede, at least in some degree, the selling of plants, especially the selling of them at such low prices as at present, to the great injury of nurserymen, who have a living to make by the profits of their business, while the botanic garden has support from other quarters.

There are several interesting private gardens in and about Brussels. That of M. Reynders, beyond the Porte de Louvain, is the most so. His collection is not extensive, but very select; as it is restricted to those species only which recommend themselves by the beauty of their flowers. I observed here the finest plant of Kennèdy*a* dilatàta that I have ever seen: it covered the whole end of one of the houses, and was bearing, I may say, thousands of flowers. Many of the plants, as hoveas, oxylobiums, pimeleas, epacrises, pultenæas, platylobiums, some of the choicer camellias, and many others of equal merit, were growing planted out, and showed to much advantage. A fine plant of

Plagiolòbium chorozemæfòlium was 3 ft. high, in full flower, and was truly magnificent.

The next garden that I shall mention is that of M. Vandermaelen, the proprietor of a lithographic establishment, a gentleman very fond of plants, who has erected two beautiful cast-iron houses, one for stove plants, and the other for green-house plants. Among the latter are some of esteemed and rare species. The stove plants looked rather sickly, perhaps from being too much exposed while the house was being erected. M. Vandermaelen has two collectors in Brazil seeking *Orchídeæ*. He has already received from them some species of these plants; but I had not an opportunity of seeing them; as it was night before I saw the gentleman himself, and the gardener was not allowed to show them. I found M. Vandermaelen in the evening busily engaged in his garden, with several other persons, catching moths and other insects, of which he has a very extensive collection. Behind his houses is his museum, which is well stocked with all sorts of stuffed birds; serpents of every description, preserved in spirits; shells without number; and, in fact, every curiosity he can possibly obtain. I was very much gratified with this museum; and, if I had had more time, I should have visited it again, on purpose to take notes of the most interesting objects which it contains.

I next directed my course to the palace of Läcken, situated about three or four miles out of Brussels. The palace is occupied, at present, by the King of the Belgians, who is very fond of plants, especially of those of an odoriferous kind. His Majesty has had Mr. M'Intosh from Claremont [see p. 328.] to superintend the building of some new houses, namely, a stove, a green-house, and a long range of pits. The whole of these are finished in a very superior manner, and reflect great credit on Mr. M'Intosh, as in them both beauty and utility are combined. The latter quality is too often neglected by garden architects: beauty seems to be the principal subject of their study. I particularly admired the manner of giving air in front of these houses by means of an iron rod that is extended from one end to the other, and is very ingeniously connected with each light; so that a person may stand at one end, and give all the lights air at once. As I have never seen anything of the kind elsewhere, I suppose that it is Mr. M'Intosh's own invention; and, at any rate, it is a very ingenious one. The orangery here is a fine large noble-looking building, upwards of 300 ft. long, 50 ft. wide, and 40 ft. high, with a common slated roof, and large windows in front with pillars between. The gardener who showed me round informed me that it has been proposed to erect a new conservatory in a large open space, and to remove from the old one the windows at present in front of it, thus throwing the new and the old conservatories into one. If this were done, it would produce, I should say, one of the finest conservatories in Europe; the magnificent orange trees behind, and the handsome specimens of New Holland plants in front, would have a fine effect. The garden and grounds seem to be in a very neglected state; and the want of evergreens in the park and pleasure-grounds gives these places a meagre and cold appearance, as compared with Claremont and other country seats in England. Mr. M'Intosh has been endeavouring to remedy this defect by planting a great number of evergreens of various sorts; and I hope they will succeed; but former experience nearly proves that they will not. Some years ago, when I lived in France, I have known them thrive well for several years; but, when a sharp winter set in, they all died; and the larger the plants were, the sooner they perished. Few persons, except those who have lived on the Continent, would believe how cutting the easterly winds are: it is from that quarter the severest weather generally comes. However, now that a beginning of planting evergreens has been made at Läcken, I hope that the planting of them will be followed up; for much is still wanted to render Läcken a place of much importance in the way of gardens or grounds.

At Enghein, a few miles from Brussels, there is an extensive nursery, belonging to M. Parmentier, who has a very large assortment of exotic plants; but they are not by any means in a good state of cultivation, if I except his species of palms, of which there are some fine and very clean plants. His New Holland plants are in a very bad state, resembling those in the botanic garden at Brussels. His collection of Orchídeæ is very extensive, and contains many rare and valuable species; but the plants are not well cultivated: they seem, as it were, starved for want of a sufficiency of heat and moisture.

The Duke d'Aremberg has here a large garden, which contains two fine ranges of houses, principally for stove plants, of which there is an immense number; and many of them are of esteemed species, though not of newly introduced ones. In the orangery there are some of the largest specimens of orange trees I have ever seen; and they are mostly in good health. There is not a château here, it having been burnt down some years ago.

From Brussels to Louvain the country is slightly undulated; but it is not so well wooded as on the other side of Brussels: it is, nevertheless, of considerable interest. At Louvain there is not any nursery worthy of notice; but there is an excellent botanic garden, which contains an extensive collection of rare plants, especially of stove plants; and these are in the highest state of cultivation of any I have yet met with. The garden is not large, but it is well laid out; and the whole is in a good state of keeping, and therefore reflects great credit on M. Donkellar, the head gardener, who is a very intelligent and a very civil man. He introduced me to the gardens of several of the principal private gentlemen in the place; but, after seeing his own, there appeared to me little else worth notice.

The road from Louvain through Tirlemont and St. Trond passes through a country of very little interest. The inhabitants seem much more dirty and wretched in their appearance than in Flanders, where they are remarkably clean. The houses of the poor look extremely miserable, and the absence of wood and water from the scene causes it to present an uninteresting appearance. As you approach Liège, however, the country greatly improves, and becomes extremely hilly and varied. The approach to the town of Liège is beautiful: you descend gradually a steep hill with the town lying underneath as it were, with a hill on the left, and a steep valley on the right; onward, in front, you have an extensive prospect, in which are seen the windings of the beautiful river Meuse, and beyond a fine fertile country, which extends almost to the borders of Prussia; so that the scene is one of striking interest to a stranger. Liège is a large and rather well-built town on the banks of the Meuse: it contains some very extensive ironworks, especially those for the casting of cannon and muskets, for supplying the army. The royal foundery is a very large and commodious place, capacious enough for the manufacturing of almost any thing: it was here that the large mortar was cast, which the French used at the siege of Antwerp. As I entered Liège, I observed a great many of the countrywomen going out of town with large baskets on their backs, filled with unfinished muskets, but for what purpose they were conveying them into the country I was not able to discover. There is here an extensive nursery, belonging to M. Makoy [see p. 321.], in which a rich collection of choice plants is cultivated, and which, for neatness and good management, does not yield to any in that country. Altogether, it does great credit to its spirited and enterprising proprietor, who has been only a few years in business, and, what is more surprising, was not educated either for a nurseryman or a gardener. M. Makoy has been in England twice or thrice, for the purpose of purchasing what is new and choice, and spends a considerable sum annually for the same object. There are several other nurseries in the neighbourhood, but they are of so little importance as scarcely to merit notice. There is here a small botanic garden, adjoining, and belonging to, the university: it contains four small houses; but the collection of plants is very indifferent, and the plants are not in a good state of keeping. In the open ground there seems an extensive assortment of hardy herbaceous plants, but these did not make, at this season, much show. The walks were of coal-ashes, instead of gravel; the latter is not to be had here, and is, I believe, in most parts extremely scarce; on which account the garden walks in this country are generally very unsightly. I returned from Liège to Brussels, and thence to Tournay, through Enghein and Ath. The last is a small but strongly fortified place, the entrance to which is over five or six drawbridges. I was informed that it was fortified by Napoleon, and that he deemed it the key to Belgium on that side. All along this line of road, you pass through a beautiful cultivated country, well wooded and watered in every direction. Tournay is a small, but rather a well-built town, and is strongly fortified, owing, no doubt, to its being near the frontiers of France. The river Scheldt runs through the town, nearly in the middle of it, which facilitates the communication with other places. There are few nursery gardens here. An extensive grower of tulips, who resides within the ramparts, has raised, I was informed, a great many splendid varieties from seed. There is here a sort of botanic garden, but the most miserable one I have ever seen; the management being entirely left to common labourers. The next garden which I visited was that of Sir Henry Oaks, Bart., who has a very neat range of small houses, containing a select collection of well-cultivated plants. Sir Henry cultivates those species and varieties only which recommend themselves by the beauty of their flowers. I observed a fine plant of Chorózema Henchmánn*i*, nearly 5 ft. high, covered with its beautiful blossoms from the pot to the very top. Sir Henry showed me a number of gold and silver medals, awarded to him by different societies, both in Belgium and France. I found Sir Henry one of the most affable and obliging gentlemen that I met with on the Continent: he not only personally showed me his garden, but introduced me to those of his acquaintances that had any thing worth seeing. I did not find any to surpass his own, although several were tolerable; but the proprietors of them all declared that Sir Henry was the first to instigate them to do what they had done, as there did not exist a green-house of any consequence in Tournay before his was built.

I proceeded from Tournay direct to Paris, without stopping, except for changing horses and getting refreshment. We had not gone far, before it was visible that we were in another country. Any person, who has not seen it, would scarcely believe that such a difference could exist in so short a distance: the houses began to be more and more dirty as we advanced into the French territory; and, instead of the neat Flemish brick houses, nothing was to be seen but miserable clay huts, which often presented a very filthy appearance: the disparity in the state of the inhabitants was about as great. The roads also became worse, and the diligences much more clumsy and awkward, than those in Belgium. The distance between Tournay and

Paris being considerable, there is, as it might be supposed, a great variety of surface. The country, after leaving Lille, is flat and well cultivated; as you proceed, it becomes more undulated; but there are neither rivers nor canals to be seen, as in Belgium. In some places you pass large forests of underwood, that is cut down every seven years or so, for fuel; but a few trees are left at irregular distances, to use as timber for building houses, &c. The approach to Paris, in this direction, is very interesting, the ground on each side of the road being nearly all laid out in market-gardens, for supplying the Paris markets. There seems to be but little neatness displayed in the keeping of these gardens, and the vegetables show but very indifferently while growing in what appear to be open fields. The nursery gardens in and about Paris are very numerous; but since the revolution they have fallen much to decay. The first private garden I visited was that of M. Boursault, once the finest in Paris, but now it is, I am sorry to say, sunk almost to nothing; owing, as I was informed, to the deranged state of the proprietor's fortune. Most of the plants are already sold, and those which remain are all for sale; among the latter is a splendid plant of *Araucària* excélsa [see fig. 33. IX. 147.], the tub of which is sunk deep in the ground, the top of the plant touches the glass, and wants room: the remainder are principally camellias, with some stove plants. The beautiful range of houses on the south wall [IX. fig. 34.] no longer exists; its place is occupied by a trellis of vines and peaches. The ground still remains in nearly the same state, and is all, I was told, to be sold, if a purchaser can be found.

The nursery of M. Noisette is very extensive, and the plants, generally, are in tolerable condition. His camellias are fine, and the winding walk in the centre has a good effect. I found nothing new; as he said he could not sell expensive plants at present, and could not, as a matter of course, he added, afford to buy them. I ventured, however, to express to him my opinion, that choice and newly introduced plants are more likely to yield a profit than the more common and more familiarly known ones.

The garden of M. Cels has suffered much since the death of its late proprietor, but it still contains many choice and rare plants, though few, if any, of the very newly introduced kinds. The two young MM. Cels seem to be very intelligent men, and to be extremely anxious to keep up the reputation so long enjoyed by their late father. I visited the establishments of many other nurserymen, as those of MM. Fion, Lemon, Jaquin frères, seedsmen; M. Vandael, and several others; but I did not find, in these places, any thing worth mentioning. The last place I visited was that of M. Soulange-Bodin, at Fromont on the Seine, who has an extensive garden and grounds (I should think, formerly belonging to some of the French nobility, who were the victims of the first revolution). There is only a very small portion of the grounds occupied for nursery purposes, the rest is sown with oats, barley, &c., with the exception of some portion that is planted with large trees of various sorts; and forms a kind of park or pleasure-ground. M. Soulange-Bodin has the greatest collection of glass structures I have ever seen: they consist of houses and pits. The stove contained many rare and valuable plants, and they were in tolerable condition; but the green-house plants were looking generally sickly. M. Soulange-Bodin cultivates, and well, an immense quantity of camellias; he also grows a great number of American plants, especially of rhododendrons, kalmias, ledums, azaleas, &c.; and immense quantities of roses of all sorts, both as dwarfs and as standards: his place, altogether, is well worth seeing, and was, for its extent, in tolerable order.

The botanic garden of Paris is a magnificent place: it contains not only a very extensive and good collection of plants, but almost every kind of curiosity you can imagine, such as a museum, cabinet of natural history, a menagerie, and many other things, that are quite beyond my power to describe, and, in fact, to recollect.

The flower-markets of Paris present at this season (Easter) a very gay appearance, and the articles are produced in a state which I have never seen excelled: an enumeration of the articles would make a very long list, and I do not, in fact, recollect them. The public walks in and about Paris are numerous. The finest are those of the Tuileries, the Champs Elysées, the Champ de Mars, the Boulevards, &c., which, at this time, were crowded with gay company, diverting themselves with various sorts of amusements.

In passing from Paris to Rouen, you traverse a fine cultivated country, abounding with objects to amuse the stranger. At Rouen there are several small nurseries, but these, like those of Paris, are not in a flourishing state. M. Vallet has still a great many fine orange trees and roses, but nothing new. Fremont le Jeune's nursery contains a good collection of fruit trees and ornamental shrubs, and was in good order. The nursery of M. Prevost is still the finest in Rouen. That of Calvert and Co. is all gone to wreck, an event which I have expected for these six years past, and which was greatly owing to the ambition and mismanagement of M. Calvert, who was always embarking in speculations which, owing to neglect or some other cause, totally failed. I have often known him and his wife leave Trianon for six months together, and commit the business to the mercy of an old lawyer, who acted as a sort of trustee in his absence: from this man neither money nor any thing else could be had, for carrying on the business, so that the men were obliged to leave for want of their wages; and such was the character of the place, that no others were to be found willing to engage, as few had ever had any thing to do here without repenting it. I was very sorry to see such a fine nursery as this was, and one which, by good management, might by this time have been the finest in France, all going, as at present, to pieces. I was informed that the houses and grounds have been purchased by the College, for the purpose of removing the Jardin des Plantes from its present situation to Trianon, which is a much more eligible place than that in which it is now situated. I visited several other nurseries and gardens, but I found very little of any consequence: the plant-houses were nearly all occupied by well-known species of plants; and, in the open ground, standard rose trees and fruit trees were the principal objects. In travelling from Rouen to Havre, you pass through one of the finest corn countries in France, and one which is deemed the granary of France. Immense quantities of apple trees are planted in rows, in some places along the roadside, in others through the fields in irregular rows: all these are for the production of apples for the purpose of making cider, which is the principal drink of the people in this part of the country. Some of the cider is good, but a great part of it is very inferior; what the poor people drink is called boisson; that is, half cider and half water; which mixture tastes, to a person not used to it, very nauseous. Havre being a seaport, there are no gardens of any consequence there. The harbour is good, and many large ships are at present in port, especially those of Americans, who seem to have a great deal of traffic here. I left Havre by the Camilla steamer for Southampton, which we reached in ten hours after leaving the port of Havre. I was very much gratified with my journey, especially with the part of it made through Belgium, where the spirit of gardening is, at the present time, at a much higher pitch than in France.

Art. III. *A Series of Designs for laying out Kitchen-Gardens.* By Mr. T. Rutger. Design 4., *Containing Two Acres within the Walls, and an Acre and a Half in the Slips.*

The following plan (*fig.* 75.) comprises about two acres within the walls, including the forcing department, to which the slips are intended to add nearly an acre and a half more. Doors may be put in the side walls, for convenience, if wanted. The middle walk through the garden is intended to be wide enough for a cart or carriage, which is always convenient, and more

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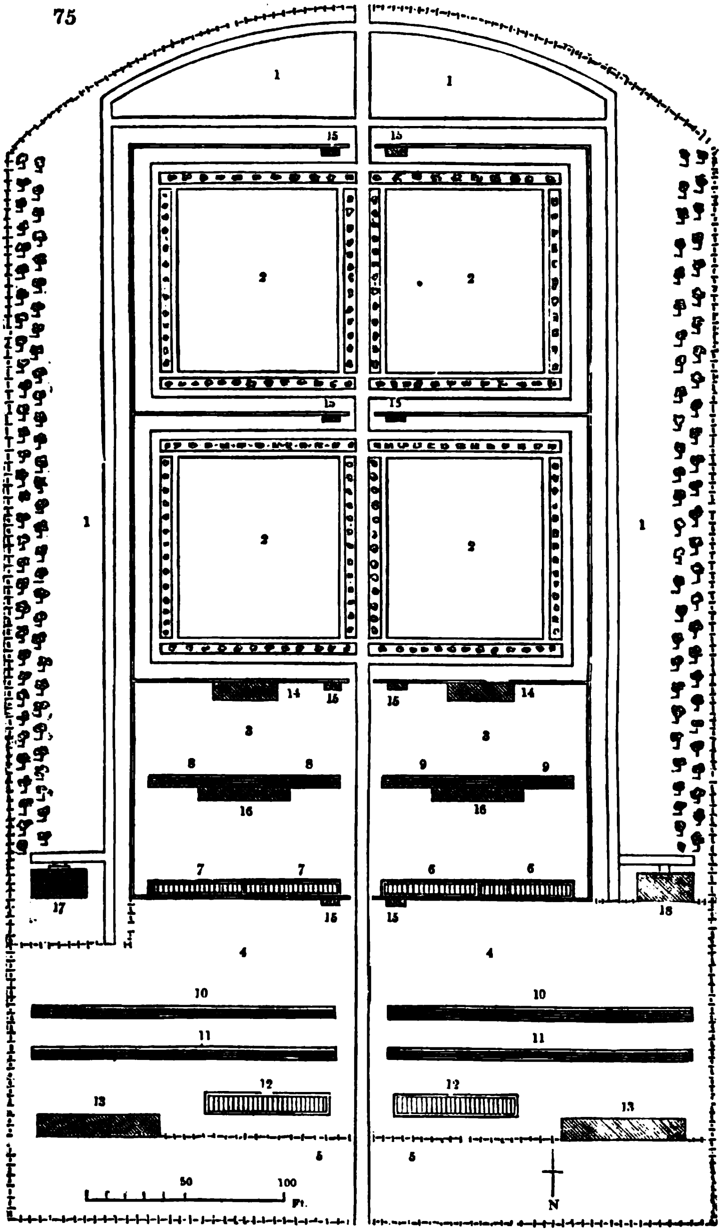

1. Slips and fruit-garden. 2. Culinary department. 3. Forcing department. 4. Frame ground. 5. Department for compost, mixing dung, &c. 6. Pine-stove. 7. Succession-houses, or for other purposes. 8. Vineries, fig-house, &c. 9. Peach-houses. 10. Cucumber ridge, and for carrots and potatoes under hoops, &c. 11. Melon and cucumber ranges. 12. Pits. 13. Sheds. 14. More sheds, if wanted. 15. Water-tanks. 16. Back-sheds. 17. Gardener's house and yard. 18. Fruit and onion room, with lodging-room for under-gardener, and seed-room over.

especially in gardens of any considerable size. In this plan a cross wall is added, both for the sake of shelter, and to afford a proportionate length of wall for fruit trees.

Shortgrove, Essex, 1834.

Art. IV. *On the Trees and Shrubs which are most suitable for Planting, to afford Food and Shelter for Game, and more especially for the Pheasant.* By Mr. James Munro.

The filling up of old plantations with various sorts of evergreens and of deciduous flowering shrubs, is now becoming generally practised throughout the country; and the chief object for which this is intended is to produce a shelter for game, and more especially for the pheasant. The planting of these undergrowths is, however, like many other things, often performed without regard to consequences or economy; while the chief aim ought, in this case, to be a conjunction of the useful with the beautiful. Certainly, there can be nothing better adapted for the purposes of sheltering game than the common laurel, Portugal laurel, rhododendron, holly, arbor vitæ, &c., while these produce, at the same time, an agreeable effect upon the forest scenery; which, without the aid of evergreens and other undergrowths, is extremely monotonous. Still, however, while we endeavour to produce both these effects, we should also have an eye to something useful and economical. What avails it how well soever game be provided with close and impenetrable coverts, when the common means of sustenance are wanting within their leafy domicile? The birds are compelled by hunger to leave behind "the umbrageous glade," and seek their food in the fields of the farmers; who, in some districts of the country where pheasants are very plentiful, are compelled to seek redress for the damages thus sustained. Such a course, on the part of a tenant, though it is quite fair and reasonable, is a very disagreeable alternative, and must prove destructive of that friendly intercourse which ought to subsist between tenant and landlord. To the true sportsman, too, such a state of things is altogether incompatible with good taste; the frequent migrations of the pheasant from forest to field in quest of food, so far domesticates the bird, that even those who can feel a pleasure in depriving it of life are bereft of half their enjoyment; for, so far as what is termed sport is considered, they might as well take their station behind the barn-yard wall, and shoot at the poultry quietly feeding at the barn door.

On these grounds, I confidently expect the cooperation of both the sportsman and the economist, in my endeavour to accomplish a means of providing pheasants with food, in woods and in pleasure-grounds, in such abundance as shall in a great measure prevent them from attacking and destroying field crops, remove the cause of complaint of tenants against them, and, by restoring the birds to their native shyness, render them more worthy of the true sportsman's notice. I am nearly convinced that these desirable ends might be accomplished by the introduction of a number of our cultivated fruits into the forests where the latter chance to be thin, and well aired; and particularly around the margins, where there can be little doubt of their thriving. These fruits might consist of all the common varieties of currant, gooseberry, raspberry, service *, &c., with all the early and hardy sorts of apple and pear that are known to suit the climate of any particular locality. Pears, in particular, I have seen the pheasant devour with great avidity. I am aware that two objections will be offered to this proposal: first, the expense of fruit trees, and of small fruit bushes. These, so long as the demand remains limited, will, of course, keep up their present prices; but, were the demand for such articles increasing, nurserymen would likewise increase their respective stocks of them, and, with the certainty of double the usual sales, would be well able to sell, in large quantities, at greatly reduced prices. The other objection is, the encouragement which would thus be given to juvenile depredators; but the cause of this objection would disappear as the fruits became common by every road side: the fruit-growers on Clydesdale and elsewhere can testify to the truth of this. The evergreen privet is another shrub, the importance of which, as a covert for game, seems not to be fully known. This plant, like the laurel, retains its leaves all the winter, and is so elastic in its fibre, that it soon loses its upright habit, and, bending down to the earth, throws out roots of its own accord, and so forms one of the most comfortable coverts imaginable. The privet possesses another desirable property. About two years ago, I was employed in packing up a few thousand plants of privet, about 2 ft. high, which had all flowered the previous summer, and produced berries in large quantities: while handling the plants, a few barn-yard fowls, which I then kept, came and picked off the berries, which they seemed to prefer to the oats which were strewed around them. Now, it is not improbable that pheasants might be just as fond of this fruit as these fowls were. I will only farther add, that, if food of this description were provided in sufficient quantity, it being partly the pheasant's natural food, the flesh of the bird might also be improved in flavour.

Brechin, March 25. 1834.

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* Symphòria racemòsa, with its large white berries, which are freely produced, might also be eligible: indeed, I think, I have been told of some one's planting it in coverts for pheasants, that they might partake of its berries for food.

Mr. Waterton has contributed an excellent communication on the habits of the pheasant to the *Magazine of Natural History*, vi. 308—314. We quote Mr. Waterton's remarks on providing this bird with food:—" Food and a quiet retreat are the two best offers that man can make to the feathered race, to induce them to take up their abode on his domain; and they are absolutely necessary to the successful propagation of the pheasant. This bird has a capacious stomach, and requires much nutriment; while its timidity soon causes it to abandon those places which are disturbed. It is fond of acorns, beech mast, the berries of the hawthorn, the seeds of the wild rose, and the tubers of the Jerusalem artichoke. As long as these, and the corn dropped in the harvest, can be procured, the pheasant will do very well. In the spring, it finds abundance of nourishment in the sprouting leaves of young clover; but, from the commencement of the new year till the vernal period, their wild food affords a very scanty supply; and the bird will be exposed to all the evils of the vagrant act, unless you can contrive to keep it at home by an artificial supply of food. Boiled potatoes (which the pheasant prefers much to those in the raw state) and beans are, perhaps, the two most nourishing things that can be offered in the depth of winter. Beans, in the end, are cheaper than all the smaller kinds of grain; because the little birds, which usually swarm at the place where the pheasants are fed, cannot swallow them; and if you conceal the beans under yew or holly bushes, or under the lower branches of the spruce fir tree, they will be out of the way of the rooks and ringdoves. About two roods of the thousand-headed cabbage are a most valuable acquisition to the pheasant preserve. You sow a few ounces of seed in April, and transplant the young plants, two feet asunder, in the month of June. By the time that the harvest is all in, these cabbages will afford a most excellent aliment to the pheasants, and are particularly serviceable when the ground is deeply covered with snow." — *J. D.*

Art. V. *On the Cultivation of Potatoes, the Cause of the Curl, and the Manner of keeping and preparing the Sets.* By W. M.

On reading the observations on planting potatoes, by J. Hart of Dublin (IX. 589.), it struck me that, if every one would communicate the results of his own practice as a potato-grower, it would elicit facts from which correct data might be obtained that would enable horticulturists to determine generally what are the real causes of failure in the cultivation of that valuable vegetable.

Much has been said on the curl in potatoes, and many reasons have been assigned as to the cause of it; but most of them are unsatisfactory, being often directly opposed to every day's experience. Perhaps my ideas on the subject may be as vague as those of my predecessors; but, be that as it may, I have the satisfaction of knowing that, by attention to the rules here laid down, I have never failed of success.

I shall begin with the most prevailing idea, that the curl is occasioned by the over-matured state of the tubers from which the plants were taken. This is a point on which I differ from some who rank high as vegetable physiologists; but, always judging for myself according as circumstances have occurred, I am induced to believe that much more importance is attached to that cause than it really deserves. That it is possible for potatoes to be over-matured, I admit; but it will only occur in those seasons that are exceptions to our summers, generally considered.

During the last twenty years I have been extensively connected with the culture of potatoes on various soils, and by many different methods, both for early and late crops; and, though I have never suffered from an attack of the curl, I have in many instances seen the crops of those around me suffering to a great extent during that period. I will describe my practice in as few words as possible. For early crops I always plant tubers produced from an early crop the preceding season, in preference to those of a later growth. I consider tubers well matured preferable for planting, because in them the embryo of the future plant is more perfect than in those not yet arrived at a state of maturity; and, consequently, the functions of the plant are brought more readily into action by the three great agents of vegetation, light, heat, and moisture, than in those of later growth. The well keeping of potatoes intended for planting is a very material point as respects the curl in the future crop. I hesitate not to say that the curl is often caused by the injudicious manner in which potatoes are frequently stored through the autumn and winter months. We often see them thrown into large heaps, and suffèred to remain till young shoots appear through the top of the heap. They are then perchance turned over, to rub off the young shoots, and again consigned to chance till another crop of shoots appear. Indeed, I have known instances where three successive crops have appeared before the time for planting had arrived. Under these and similar circumstances, we have no reason to expect a healthy growth and good crop; it is quite impossible that plants, with their vegetative powers thus nearly exhausted, can fully develope their respective parts; and hence those monstrosities, contortions, and contracted appearances of the stem and foliage, which end in disappointment to the grower. It is not to be inferred that I consider this as the sole cause of the curl in potato crops; on the contrary, I believe that there are others; but these appear to me of a secondary nature, and I may at some future time address you respecting them, should you deem the hints here thrown out worth attention.

My method of keeping potatoes for planting is this:—I lay by well-matured tubers of my earliest crops, in a dark dry shed, frequently turning them over, to prevent them from sprouting; which by proper attention may be effectually done. They will retain their vegetative powers unimpaired. When the season for planting arrives, I cut my sets in the following manner:

first, I cut off the blind eye, as it is generally called, at the base of the potato, and throw it into the waste basket; I then proceed to divide the remaining part, according to the size of the tuber, and the number of eyes it contains, always taking care to have one good full eye at least to each set; and, when the sets are cut, I lay them in a moderately thick heap for a few days, that they may dry before planting, taking especial care, in early crops particularly, not to plant when the ground is very wet from heavy rains or snow.

I have frequently taken tubers from fully matured crops, and exposed them to the influence of the sun for several weeks; and in the following season planted them at the same time, and on the same piece of ground, with tubers of a late crop; the results have fully confirmed my opinion, that planting early-produced tubers, for early crops, is the best method to adopt.

Respecting the idea that late-produced tubers will not produce a curled progeny, I submit the following case, to show that they are as likely to produce curl in the succeeding crop as the most matured tubers. In the year 1826, through the prevalence of rain, the late crops were generally not of a marketable quality; consequently the greater part were reserved by the growers for planting. The following spring and summer, the curl prevailed to a great extent, and hundreds of acres were ploughed up, the crop not being worth the expense of taking. I examined many hundreds of plants on different soils and under different modes of treatment, and seldom found more than three or four per cent of healthy plants. On carefully examining the soil, I found nothing to induce a belief that it was caused by any local circumstance; indeed, so general was the disease, that the most sceptical growers declared they could not ascribe it to any other cause than the unripe state of the sets; a conclusion strengthened by the fact, that those who planted well-ripened tubers had crops free from curl and as productive as usual.

East Ham, Oct. 28. 1833.

Art. VI. *An Account of a Mode of cultivating Potatoes in the Neighbourhood of Aberdeen; preceded by some Remarks on the Potato Culture of the Neighbourhood of Dublin.* By Mr. James Wright, Gardener at Westfield, near Aberdeen.

In turning over your Magazine, I observe (IX. 589.) "a note on the planting of potatoes," by James Hart, Dublin. I was rather surprised to see such a communication [see X. 78.] from a country so celebrated for the cultivation of the potato as Ireland is generally reported to be. I do not approve of the Irishman's mode, as a whole, and of Mr. Hart's amendment still less. I shall neither occupy my own time nor your widely circulating pages by reviewing it in detail, but shall briefly notice a few of its most prominent points. Your correspondent states "that potatoes, when they are cut, should not be spread out to dry, but laid up in a close heap for about a fortnight before planting," and by such means he obtained three quarters of a crop! What description of floor the seed from "Campbelton" had been spread upon, I cannot conceive. In the last week of December, 1833, I cut a few sets, and laid them flat down with their cut sides undermost, on purpose to try the experiment, upon floors of the following materials; namely, wood, Caithness pavement, brick, and black earth. I also, by means of a string from the roof of a summer-house, suspended a few, like Mahomet's coffin, and I could discover no difference, except that those upon the wood, and those suspended, were drier than the others. In 1827, I cut my sets rather early, and laid about five Aberdeenshire bolls, or 1½ ton, into a heap for three weeks; when taken out, a great part of the sets composing the interior of the heap were like soap, and others were like empty shells. About one tenth of them never appeared above ground, and nearly a fifth of those which came were cut up by the curl.

The selection of the sets I consider the most important part of potato-growing. I rent annually, from a gentleman about three miles from my own place, from one to two acres for growing winter potatoes: there I raise all my seed for the ensuing year; and the potatoes that I use for this purpose are as different from those grown in my own grounds as if they were imported from the foot of the Himalaya Mountains. There may not be such variety of soil in the vicinity of Dublin. When the stems begin to fade, but long before the potatoes are ripe, I go over the drills and pick out all the runaway stems, which show themselves by standing upright and growing vigorously. At the same time I dig up all the potatoes which I design for seed, and lay them in pits of perhaps two bolls each, and leave them uncovered for several weeks. I begin to dung and dig the ground by the 1st of March; I take the seed potatoes from the pits about the middle of the month, and cut them into good strong sets, and spread them out to dry upon the floor of a summer-house, for two or three days; and then plant them at convenience.

The common way of planting about Aberdeen, for generations back, has been with a small dibble, about 1¼ in. in diameter; the planter carrying the sets in a bag before him. A good hand will plant half an acre per day in this manner; but, from the small size of the dibble, some of the sets go plump to the bottom, others half down, while others stop in entering. To remedy this defect, I have invented a dibble (*fig.* 76.) of the fol-

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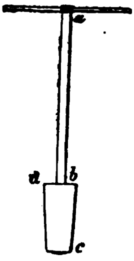


lowing dimensions:—Handle 14 in. long, stalk from *a* to *b* 27 in., from *b* to *c* 7½ in.; circumference of the stalk 4¾ in., at *d* 8 in., and at *c* 6 in.: from *b* to *c* is covered with iron one eighth of an inch thick, with a point of solid steel 1½ in. deep. I lay down two lines 18 in. apart on one side of the ground to be planted, and, taking the dibble in both hands, with a foot on each side of the line, I make the holes at the rate of eighty a minute; a boy follows close behind with a small basket, dropping in the sets, and drawing one foot over the holes, so as to cover them neatly in. Then, by lifting both lines at each end alternately, there is always one of them tight. This method of planting is superior to every other that I know of, where ease, despatch, and accuracy of execution are desirable. The size of the hole has this advantage, that the largest cutting goes to the bottom (6 in.), and the smallest goes no farther; consequently, they come up all together, strong and healthy, and as equal, as to distance, as if they had been pointed off with a pair of compasses. A man and a boy putting in the sets will plant three quarters of an acre a day with the greatest ease. The system of keeping the "cuttings of the one end separate from those of the other, drilling, and covering in with the hoe," may be all very well for a gentleman's gardener, who has time, men, and money at command; but, to a market-gardener paying a high rent, the smallest saving of either is of paramount importance. The above simple process (simple in every respect, and which may be adopted by the poorest person in the "Emerald Isle," without requiring either extra time or expense) I have practised, with uniform success, for six years; and the produce has generally been 32 bolls per acre of early, and 40 of late potatoes; or 11 and 14 tons, or thereabouts, in soil light and dry. With the "Scotch pink eye," and "Scotch apple," I am not at all acquainted. The "Manlie," a round potato, and the red-nosed kidney, are both early, and, I think, superior to any of the metropolitan varieties that I have seen (and I have had numbers of them), where they are grown to eat as well as to sell. The red-nosed and blue kidneys, and blue American round, are superior to any other late sorts. This method of culture may be perfectly understood, and generally practised in England, but I have neither seen, nor heard of, its existence there.

Westfield, January 16. 1834.

Mr. Wright has since, in a communication dated March 20., favoured us with tubers of the Manlie and red-nosed kidney potatoes, of which he has spoken above. On the kind called the Manlie, he has added, that "an old gardener is living here just now, who recollects perfectly this kind being landed, in a small basket, from a Dutch vessel, fifty-five years ago. I will not pretend to say that they are better now than they were then, but mine are superior to what they were eight years ago, when I commenced business. This goes far to corroborate my former statement, that varieties of potato may be not only kept from degenerating, but that they may even attain greater perfection (due attention being paid to the seed), without importing fresh seed potatoes from a distance."

ART. VII. *A Method of expediting the Fruiting of Kidneybeans in the open Air; and a Mode of obtaining a Second Crop from those forced in the Stove.* By Mr. JAMES CUTHILL, Gardener to S. SULLIVAN, Esq., at Broom House, Fulham.

I HAVE tried an experiment with the early dun kidneybean, which I have found answers beyond my expectations, and which, I trust, may be of some use to your readers. I sowed a large pan of these beans about the middle of March, and put it into a house the temperature of which was about 60°. After the first leaves had expanded, I removed the plants into a cold pit, where they remained till the 15th of April following. They were then (still in the pan) exposed to a south aspect, and covered, for a few nights, with matting; and, finally, about the 1st of May, I planted them out into an open border, having a western aspect. The stems were then about 8 in. long, and, to prevent them from damping off, I did not plant them above an inch deeper than they stood in the pan, but moulded them up by degrees. When transplanted, the leaves were quite brown, but the centre bud was green; the old roots were quite dead, and new ones about an inch or so long. I planted them in the centre of the border; and, upon the same day, transplanted into the same border other beans of the same sort, but sowed at the usual time. The result has been, that I had beans from the former upon the 12th of June: the latter will be ready, as near as I can judge, about the 28th of that month; making about a fortnight's difference in the time of ripening: and this difference would have been greater, had I had a south border at the time to have planted them on. I may add, that I looked at the other gardens in the neighbourhood, and saw no kidneybeans, in the open air, ready before my second crop. This mode of treating the kidneybean was not adopted from accident, but I was driven to try the experiments which led to it by sheer necessity. Every gardener knows that, when the forcing of the kidneybean is prolonged to a late season in houses, the plants become infested with a well-known insect; and, if they are planted out in a pit or frame, they are attacked by the red spider, which will soon spread all over the melon ground: and the gardener, for the sake of a few beans, draws upon himself an annoyance that he can hardly get rid of for the whole summer.

I tried another experiment with some plants of the same sort of beans, that were growing in a pit in a hot-house, and had been transplanted into a little mould on the tan in cross rows, about 5 ft. from the glass, after they had done bearing a most excellent crop. I cut these plants down to 1 in. above the seed leaf, and watered them well. In about a fortnight they were in full flower, and bore as good a crop as I have had from beans that had been transplanted into pots, and that had taken three times as long in coming in bearing.

Broom House, Fulham, June 20. 1834.

ART. VIII. *Short Communication.*

THE Proportion borne by the Roots of a Tree to its Branches.— Virgil's account of the Æsculus,

——— " Quæ, quantum vertice ad auras
Æthereas, tantum radice in Tartara tendit;"
——— " Which, as it high
Uprears its head to heaven, so deep in root
Shoots downwards to the centre;" TRAPP's *Trans.*

is generally regarded, I suppose, as a mere poetical hyperbole, descriptive of a tree whose roots extend to a very great depth; and, as applied to a full-grown or large tree, it can be considered as no other. There are cases, however, of young seedling trees, in which the poet's description, so far from exceeding, does not, by a great deal, even come up to the truth. A few weeks since, I got up a self-sown seedling oak, of this year's growth, out of a wheat stubble: the plant above ground, which was thriving and vigorous, was 4 in. high; while the root below (that is, the portion of it which I succeeded in getting up) measured 2 ft. 10½ in. Here, then, was a tree which far out-rooted Virgil's Æsculus; for its root below was more than eight times the length of its stem above; and, had the root been obtained entire, it would probably have considerably exceeded the above dimensions. I have known instances of oaks, of five or six or more years' growth, whose roots have many times surpassed the length of their stem and branches. Occasionally, indeed, these trees appear to me to exhaust their efforts, for several years together, entirely on the growth downwards (" tantus amor terræ!" so much do they love the earth), as if to make the better provision for the future more rapid increase of the plant above, which, for the time, will be almost at a stand-still.— *W. T. Bree. Allesley Rectory, Nov.* 6. 1833.

REVIEWS.

Art. I. *Transactions of the Agricultural and Horticultural Society of India.* 8vo. Vol. I. 1829, Serampore. Vol. II. Part I., 1832, Calcutta.

There is a well-written prospectus by Mr. W. Carey the missionary, who first suggested the idea of an Agricultural Society of India, and who is now secretary to it. In this the advantages of cooperation, and of joint-stock information and experience, are ably pointed out. The good done by the agricultural societies in England is referred to; and the most beneficial results, as respects the peasantry, the landowners, and the Europeans, who engage in agriculture in India, are anticipated from the institution proposed. To give some idea of the present state of agriculture in India, it is stated that, in many parts of the country, the same crop is invariably raised on the same ground year after year; hay is never cut till the grass has died or withered where it grew; scientific rotation of crops is a subject to which Indian cultivators are strangers; and the manure produced by animals is generally consumed for fuel. No attempt to improve live stock appears to have been ever made in India; though there is every reason to believe that all the animals used in the husbandry of Europe are capable of as high a degree of improvement in India as they are in more temperate regions. The quantity of waste lands in India is said to be so large as almost to exceed belief. Extensive tracts on the banks of numerous rivers are annually overflowed, so that they produce little except long and coarse grass, seldom turned to any useful account. During the rainy season these tracts are the haunts of wild buffaloes, which in the night come up from them and devour the crops of rice on the high lands. In the cold season, wild hogs, tigers, and other noxious animals, unite with the buffaloes in occupying these extensive tracts of alluvial soil; which, though now so pernicious, might, by embanking and draining, become the richest lands in the country, and contribute greatly to the improvement of the climate. Similar observations might be made respecting immense tracts now wholly covered with wood, and producing nothing whatever to civilised man; but, on the contrary, proving a nuisance to the surrounding districts, by affording a shelter to noxious animals. The oppression of landowners and petty officers on the cultivator is so great, that in some parts of the country no farmer can reasonably promise himself security for a single night. "Thus," concludes Mr. Carey, "one of the finest countries in the world, comprising almost every variety of climate and situation, diversified by hills and valleys, intersected in every part by streams (most of which are navigable six months in the year, and some of them through the whole year afford every facility for carrying manure to the land and every part of the produce to market), is, as far as respects its agricultural interests, in a state the most abject and degraded." (p. x.) This is a most forbidding picture; but it is incident to all countries in a particular stage of their progress in civilisation. Time was when the low districts of England were ravaged by the wolves and bears from the mountain forests, and when the crops on the alluvial vales of her rivers were annually swept away, or at least greatly injured, by floods. As to oppression by superiors, and thieving from others, there will always be abundance of such evils, till mankind are brought to something like equalisation in point of knowledge, and consequently power; till, in short, the mass of society becomes fit for self-government.

Gardening, we are next informed, is in almost as low a state as agriculture. "Except in the gardens of certain Europeans, who at a great expense procure a few articles for the table, there is nothing to be met with besides a few wild herbs, or garden productions of the most inferior kind. All that is seen of orchards amounts to no more than clumps of mango trees crowded together without judgment; and in which the quality of the fruit is but little consulted. The improvement of fruits is almost neglected, and every thing which can contribute to the furnishing of our tables with wholesome and agreeable vegetables and fine fruits is yet to be commenced; not to mention that ornamental gardening is scarcely known. We depend upon Europe for seeds, of which, when we have obtained them at a great price, scarcely one in five hundred vegetates, and, even after it has sprung up, seldom comes to perfection, through the ignorance or negligence of the native gardeners. It is, notwithstanding, well known that one part or other of India would suit every production, and bring every kind of seed to maturity; so that, by a free communication, those parts of the country in which the seeds of particular plants do not come to perfection, might be easily supplied with them from others, and useful plants and fruits might be gradually acclimated, so as to be plentiful in every part of India. The introduction of the potato, and more recently of the strawberry, are sufficient to show that the attempts of insulated individuals have not been in vain. How much more then might be accomplished by the joint efforts of a number of persons arduously engaged in the same pursuit!" (p. xi.)

This deplorable state of things Mr. Carey proposed attempting to improve, by the establishment of a Society which should give premiums, and publish reports; raising the funds necessary for that purpose by subscription. The Society was formed in 1820, and, after having held several meetings, a number of premiums were given, for the first time, at a meeting held in Jan. 1827; and the work before us includes the reports that have hitherto been made to the Society; or, rather, the papers which have been contributed to its *Transactions*.

To give an idea of the articles exhibited at these meetings for competition, we may mention that, at the first meeting (in January, 1827) at which prizes were distributed, the articles produced were chiefly of European garden produce; such as peas, cabbages, turnips, cauliflowers, beet, mangoes, guavas, kohl rabi, red cabbage, and potatoes. The silver medal was awarded to Yusuf Malee, of Moochee-khola, for the best potatoes raised from Cape sets. The cabbages weighed from 20 to 24 lb., and were 10 in. in diameter. The cauliflowers weighed from 6 to 8 lb., and were about 8 in. in diameter; the kohl rabi 3 lb., and 5½ in. in diameter; the turnips 2 lb., and 6 in. in diameter; and the potatoes were 3½ in. long. (App. p. xxxvii.)

We shall now look over the different papers which compose the *Transactions*, and shall select what we think will be most interesting or useful to our readers. In the introductory discourse, by the president, W. Leycester, Esq., we think the good produced by the British Board of Agriculture is greatly overrated. Instead of going to the root of the evils of British agriculture, and directing its attention to the removal of tithes, of injurious restrictions in leases, and similar political obstacles, and striking at the general ignorance of farmers, the British Board of Agriculture limited its exertions to publishing books, most of them at so high a price that they never fell into the hands of those for whom they were intended. We question much whether the Agricultural Society of India durst venture to propose to diffuse knowledge among the native agriculturists by educating their children. If they dare do this, they may rest assured, from the negative results of the agricultural societies of Britain, that it is the only effectual mode of really improving agriculture or gardening. A certain degree of knowledge is necessary to enable cultivators to make the improvements pointed out to them their own: this degree was not possessed by the great majority of the farmers of England, when the Board of Agriculture was in activity, and it is much less likely to be so in India. The consequence, in England, has been, that, in many districts, agriculture is scarcely, if at all, advanced beyond its state in the year 1790, before the Board of Agriculture was established. The same tenures from year to year; or, if a longer tenure, the same leases, prescribing the same courses of crops which were practised centuries before; the same ploughs, carts, and waggons, and the same heavy horses, may still be seen by the tourist. In agriculture, therefore, as in all matters which concern the improvement of the practices of great masses of society, to do good effectually, it is necessary to begin with a general system of education for youth. Let this be done in every district throughout India; connecting, with every school that is established, a garden and a circulating library; and teaching, in addition to the language of that district, the English language, weights, measures, and moneys: if this were done, the system of culture, both in fields and gardens, would in one generation be placed in a state to receive every improvement of which it is susceptible. But how can we suppose that this is to be attempted in India, when we know very well that the object of the rulers is not to improve the people, but to turn them to their own account? We must leave the matter, therefore, to Providence, and expect nothing more from this Society than from others similarly established and circumstanced.

Art. IV. contains answers by Mr. Stirling to a number of queries circulated by Mr. Carey, in one of which allusion is made to the celebrated school at Hofwyl, in Switzerland, "as a proper model for any schools which may be hereafter instituted in this country (India), in the establishing of which the Society may possess sufficient influence." "I cannot conceive," says Mr. Stirling, speaking of the establishment of such schools in India, "any measure which would tend so much to the production of universal improvement." (p. 43.) We are happy to find such sentiments entertained even by a single individual.

In Art. V., preserving seeds in phials of bran, or charcoal, packed in cotton, is recommended; a specimen being presented, in October, 1821, of turnip seeds capable of vegetating, which had been sent from Scotland in March, 1820.

Art. VI. describes a mode of flute-grafting practised in India, apparently from time immemorial. It differs from the flute-grafting of Europe in not taking off the ring of bark from the stock, which is to be replaced by the ring from the scion, but in péeling it down in shreds; and, when the scion ring is put on, bringing the different shreds of bark up again over the newly introduced ring, and uniting them at top over the cross section of the stock, under a piece of clay. It is evidently a less perfect mode than the European, since the bark so brought up can never unite either with the scion or with the stock. (p. 47.)

In Art. XVI. it is shown that good hemp may be prepared from the different species of *Mùsa* and *Yúcca*.

Art. XIX., "On the fruit trees of Cashmere and the neighbouring countries," is of considerable interest. The fleshy and pulpy fruits are apples, pears, quinces, peaches, apricots, plums, cherries, and mulberries. The shell and stone fruits are pomegranates, walnuts, and almonds. There are many varieties of grape vines, both of exotic and of indigenous origin; and, while the country was under Hindoo rule, much wine was made, and some brandy distilled. No mulberry of Europe, or of Lower India, equals the sweet varieties of Cashmere. They are eaten ripe, or made into wine, vinegar, or spirit. An immense quantity of oil and oil cake is made from the walnut, and the wood of the tree is said to equal that of Britain for gunstocks. It is calculated that Cashmere would supply as much walnut oil as would furnish gas enough to light all Britain. A situation between Cashmere and British India is pointed out as eligible for a nursery, in which the native fruits of both countries, and newly introduced fruits from Europe, might be propagated and improved.

"This is the Shahlomer, or garden of Pingower, made by Fiddee Khan, the son of Uleemurdem Khan, both formerly governors of the province of Cashmere. A wall of well-constructed masonry, in good repair, completely encloses an area of very considerable extent. This area is divided into five terraces, separated by breastworks of stone masonry, and descending to the south. Through the middle of this garden, led by a canal lined with stone, descends a considerable stream of clear, well-tasted, and cold water, which, by means of trenches, of simple structure and arrangement, at right angles with the main trunk, can be so diffused as speedily to flood the whole surface of the terraces. This area at present contains only one large lemon tree, some Lombardy poplars, a few rose trees; five or six parterres of poppies, and larkspurs, and about half a dozen brood mares. It has upon it two small but neat houses, with apartments for servants, near the gate, and the whole is in good repair." (p. 85.)

In this article, the floating gardens of Cashmere (*Encyc. of Gard.* new edit. § 1391.) are described; and it appears that the cucumbers and melons grown in them are neither very large nor very well flavoured. At a distance, the smaller of these gardens appear like haycocks; one melon or cucumber plant growing on the summit, and spreading down the sides; the larger are like narrow ridges of dung made up for growing mushrooms, with rows of cucumbers or melons along the top. The floating gardens are frequently collected together in a sort of fold, and surrounded by a floating fence, having a boat-way, which is opened only at particular times. Floating gardens of great extent are sometimes stolen during the night, and being towed a considerable distance, and anchored along with others of a similar character, it is difficult for the owner to recognise his property. To prevent these robberies, folds of floating gardens are generally watched during the night.

Art. XXII. contains the method of treating grape vines at Bombay; in which the chief thing worthy of remark is the mode of giving them a kind of artificial winter. This is done by laying bare the roots after the rainy season, so as to check vegetation. They are laid bare about the 7th or 10th of October, and are allowed to remain exposed for 15 or 16 days. The vines are then pruned, and in about a week afterwards, it is observed that the buds are beginning to break; the roots are then re-covered with the soil mixed with manure, and water is given to them every morning and evening till the fruit attains its full growth. They are afterwards watered every third or fourth day, till the grapes are completely ripe. It thus appears that the length of the winter given to the vine in Bombay is about 26 days, which may perhaps afford a useful hint to the British forcing gardener. It does not appear that the produce of the vines in Bombay is very great, but the gardeners have no difficulty, by means of wintering different plants in succession, in having ripe grapes every day in the year.

Art. XXIV. is a translation from a native gardening work full of receipts for rendering plants fruitful, flowers fragrant, and for changing their colours, &c. There is scarcely one of these receipts that is not perfectly absurd; for example: "To cure all diseases of vegetables, make a smoke in the field, with cows' and cats' bones, and cats' dung" (p. 141.); though the results proposed may sometimes be accounted for by the check given to the returning sap.

Art V. Vol. II. is on the mango and peach trees. "No fruit in India is held in such estimation by the whole mass of its population, from Delhi to Cape Comorin, as the mango." The peach, though a fine fruit, is comparatively little valued. The mango is allowed to be extremely wholesome and nutritious. There are a great many varieties of mangoes to be found in the orchards of India; but, like the peaches in the American orchards, they have been generally raised from seeds sown on the spot, and the majority of them are of very inferior quality.

In Art. VII. it is stated, that, in order to have good and early crops of cauliflowers, cabbages, peas, turnips, &c., it is absolutely necessary to sow only seed which has been raised in the country. For late crops, that which has been raised at the Cape of Good Hope, or Van Diemen's Land, is found best. European seeds should be chiefly used for producing plants as stock from which to raise seed in India. There are some papers on the culture of indigo and sugar, and one on the cultivation of the teak, which we have not space to enter on. The growth of the teak is said to be rapid, and the wood at all ages is found excellent. In these and other respects it is said to have greatly the advantage of the British oak. A teak board, however, is sometimes consumed in a single night by the species of insect popularly called the white ant.

Art. II. *L'Horticulteur Belge, Journal des Jardiniers et Amateurs.* In monthly numbers. 8vo. Vol. I. Nos. V. VI. and VII. Brussels, 1833.

This monthly Gardener's Magazine was commenced in March 1833, and discontinued with the seventh number; a circumstance which we regret, because its editor seems to have been a scientific and intelligent man. The first article in No. v., we have already given the essence of in p. 305. to p. 313. The other articles, in this and the succeeding numbers, are of comparatively little interest to British gardeners, though good in themselves. The first is on the field and garden culture suitable for Algiers. The next on travelling plants, such as the common O'rchis, a plant of which, according to Bosc, would, at the end of a century, be found between 9 and 10 ft. distant from the point where it was planted at the commencement; and this he accounts for by stating that, when the old bulb dies every year, a new one is formed at its side, and always on the same side. The author of this paper, M. Ch. Morren, made several experiments with the O'rchis latifòlia *Auct.* in 1827, 1828, and 1829, from which he concludes that this O'rchis does not travel to a distance, as M. Bosc supposed, but only oscillates, or moves from one side to the other, of a common centre. The O'rchis bifòlia does something more; it turns in oscillating, or, as it were, waltzes round a centre; but in such a manner that the plant, after it has stood three years, always springs up on the precise spot which contains the remains of its grandfather; and this M. Morren considers as a provision of nature for supplying it with nourishment. He thinks it is because gardeners cut over or leave to dry the old stems of orchises, instead of letting them rot on the spot where they grew, that their culture in gardens is so difficult. M. J. B. van Maelsaccke of Ghent has paid much attention to the culture of native Orchídeæ. M. Morren has seen, in his garden, O'rchis latifòlia 2 ft. high, with spikes 6 or 7 in. in length, containing hundreds of flowers. The success of this gentleman he considers as affording a proof that salep might be produced in Belgium as well as in Turkey. The Cólchicum autumnàle, which has generally been considered as having a descending bulb, is found at the same time to turn, or spin round a centre. (*Le Colchique ne marche pas, il n'oscille même pas; mais il tourne, il pirouette.*)

"These examples show what erroneous ideas the authors of horticultural works have hitherto generally entertained on vegetable progression. That which was extraordinary in their assertions respecting the movements of plants, whether laterally or perpendicularly, has disappeared, to give place to a theory perhaps still more strange, because it developes a regular and symmetric series of phenomena. Thus, in astronomy, mankind formerly believed in planetary movements, wandering and without end; but La Place has dispelled these visions, and has proved that these were but oscillations, or revolving or equally balanced movements, which thus regulate the universe. In botany, the same ideas prevailed, and it was fancied that plants would travel without limits, and yet nature only displayed oscillations, circular revolutions, and, in one word, regular movements. Symmetry is stamped on the forehead of every organised being, as it is on that of the universe; it is the character of creation." (p. 161.)

The next article is on the longevity of the onion, in which the story of an onion being found in the hand of a mummy, by Mr. Houlton of London, which grew vigorously after having been in the mummy's hand upwards of two thousand years, is introduced, and apparently believed.

A historical notice of the Botanic Garden at Brussels follows.

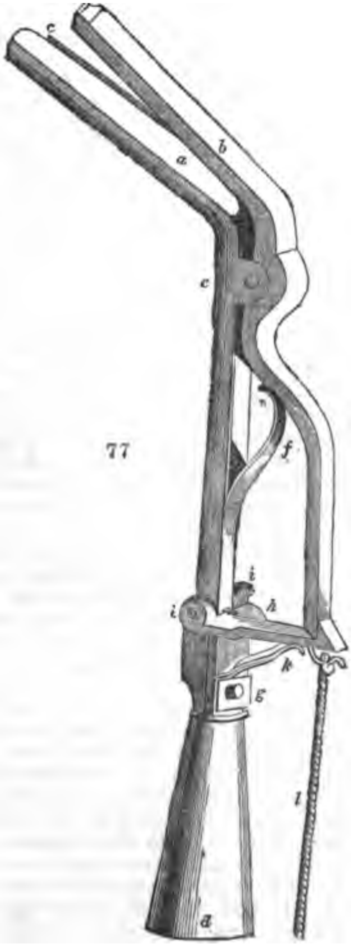
This garden belongs to a company of shareholders. It contains upwards of 12 acres, with a considerable variety of soil, but with a surface exposed to the burning sun in the daytime, and the winds from the north-west in the evening. The system of hedges, recommended by Linnæus, it is thought, might give shade and shelter to *l'école*, or what we should call the general arrangement; which is Linnæan, and in front of the hot-houses, as may be seen in our plan of the garden. (VIII. 401.) There is no Jussieuean arrangement; no collection of medical plants, or of plants used in agriculture or in the arts; no model school of horticultural operations, such as grafting, &c., as in the Paris garden; and no library or botanical museum. The range of hot-houses is 400 ft. long. The other particulars of this garden will be found in our eighth volume, as above referred to.

An article by Poiteau, taken from the *Annales d'Horticulture de Paris*, examines the question as to whether white or black walls are preferable for fruit trees. Black walls are preferred where the exposure is directly south, as moderating the heat during sunshine, and increasing it in the sun's absence. Smooth white walls, facing the south, reflect so much heat during sunshine, that they are apt to scorch the branches of peach trees; but, for east and west walls, a white polished surface produces no injury.

Passing over several articles, we come to a mode of destroying moles, which is by placing in their runs earthworms which have been sprinkled with the powder of nux vomica two days before, and left in a pot or in a heap till they become swelled, so as no longer to be able to bury themselves in the soil. The moles eat them, and of course are poisoned. A slight variation of this mode has been already noticed. (p. 234.)

To give apples an agreeable perfume, Bosc long ago directed them to be mixed with a few dried elder flowers, and it is now found that a similar effect is produced by a few truffles. Elder flowers, cloves, and a little garlic are said greatly to improve vinegar. Thatching gooseberry bushes, in the manner done with beehives, during winter, is said to be one of the best modes for preserving the ripe fruit on them for a long time. Tomatoes, when ripe, may be preserved a year in a strong solution of salt in water, without boiling, or any culinary preparation whatever. When taken out of the brine for use, they must be steeped some hours in fresh water. The common privet is highly praised as a hedge plant; its leaves contain a great quantity of tannin, and it is said to be cultivated in Silesia for the tanners. The leaves are gathered from the hedges when they are clipped in the month of June; they are dried in the sun, or in stoves, and afterwards reduced to powder; in which state they are sold to the manufacturer. The leaves, when green, are eaten by cows and sheep, but not by horses. The shoots of the privet are useful for tying articles, and hence the origin of its Latin name ligustrum. In Belgium, the shoots are used for basket-making, like those of the osier, and as props for vines; the wood generally makes a superior description of charcoal, which is used in manufacturing gunpowder, and the old wood is valued by turners for the closeness of its grain, and because it is not liable to be attacked by insects. The berries afford winter nourishment to thrushes and other birds; they supply a green fluid, used in colouring maps, &c., and a dark substance, used in colouring wine; but the most valuable product obtained from them is a greenish, mild, agreeably flavoured oil, which may be used both for culinary purposes and lamps, or for making soap. For making oil, the berries are put into a cask for twelve or fifteen hours; they are then taken out and ground, and afterwards pressed, and the oil skimmed off. The *marc*, or mass of husks and seeds, is then ground a second time, heated and moistened, and again pressed, when a supply of oil of an inferior description is obtained, which is used for coarser purposes.

The flowers of the lime tree infused in cold water are antispasmodic; and in hot water they make an agreeable kind of tea. The leaves and young shoots are mucilaginous, and may be employed in poultices and fomentations. The tree will clip into any form of hedge, avenue, or bower; it grows rapidly in all calcareous and flinty soils, especially if they are slightly humid. The timber is better adapted than any other for the purposes of the carver; it will take any form whatever; it admits of the greatest sharpness in the minute details, and it is cut with the greatest ease. It is also used for sounding-boards for pianos and other musical instruments. But the peculiar use of the lime is the formation of mats from its inner bark. In June, when the leaves begin to develope themselves, and the tree is full of sap, branches or stems, of from eight to twenty years' growth, are cut and trimmed, and the bark is separated from them, from one end to the other. This is easily done by simply drawing the edge of a knife along the whole length of the tree or branch, so as to cut the bark to the soft wood. It then rises on each side of the wound, and almost separates of itself. If mats are to be made immediately, the bark is next beaten with mallets on a block of wood, and children are employed to separate the inner bark, which comes off in strands or ribands, while the outer bark detaches itself in scales. If mats are not to be made for some time, the bark is dried in a barn or shed, and either kept there, or stacked, till it is wanted. It is then steeped twenty-four hours in water, beaten as before, and put into a heap, where it remains till it undergoes a slight fermentation. When this takes place, the inner bark separates in ribands and shreds as before. With the shreds, cords of different kinds are twisted in the usual manner; and mats are formed with the ribands in the same way as rush mats. The ribands which are to be used in forming mats for gardens undergo a sort of bleaching, for the purpose of depriving them of part of their mucilage, which would otherwise render them too liable to increase and diminish in bulk by atmospheric changes. The great advantage of lime-tree or bast mats over all others, in gardens, is, that they do not so easily rot from being exposed to moisture.



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A Fruit-Gatherer (*fig.*77.) is described, which (it being somewhat different from those given in our *Encyclopædia of Gardening*) we shall here make known to our readers. It consists of two branches (*a*, *b*). The branch *a* is the support of the instrument; it is furnished in its upper part with a cutting blade of steel (*c*), which is fixed there by three screws. Its lower part (*d*) is in the form of a socket, in order to receive a long wooden handle. The second branch (*b*) is fixed on that marked *a*, by means of a turning joint or hinge at *e*, which traverses a screw on which the branch *b* works. There is a steel spring (*f*) fixed on the branch *a*, by the screw *g*; the object of which is, to cause the branch *b* to shut on *a*. There is a copper stopper (*h*) to keep the branch *b* open, when the instrument is about to be used; it is fixed on the branch *a*, by a screw marked *i*, on which it works. There is a small steel spring (*k*) which presses the stopper against the lower end of the branch *b*. In order to gather a fruit, its footstalk is introduced between the branches (*a*, *b*), by presenting them open to it, as represented in the figure; the cord (*l*), which is fixed into the stopper (*h*), is then drawn downwards, so as to liberate *b*, which closes on *a*, while the blade (*c*) cuts the stalk of the fruit, the latter being retained between the two branches, or nippers (*a*, *b*).

Art. III. *Elements of Practical Agriculture; comprehending the Cultivation of Plants, the Husbandry of the Domestic Animals, and the Economy of the Farm.* By David Low, Esq. F.R.S.E., Professor of Agriculture in the University of Edinburgh. 8vo, pp. 695. Edinburgh, 1834. 21*s*.

The word agriculture is here taken in its strictest sense; and the work is, in consequence, confined to the subject of farming. It treats of, I. Soils; II. Manures; III. Implements of the Farm; IV. Simple Operations of Tillage; V. Preparation of Land for Crops; VI. Succession of Crops; VII. Cultivation of Plants; VIII. Weeds of Agriculture; IX. Management of Grass Land; X. The Rearing and Feeding of Animals; and XI. The general Economy of the Farm. In the preface, the author informs us that the agriculture of a country is affected, in its general character, by climate, the fertility of the soil, and the food and habits of the people; and, consequently, that, to treat of agriculture as a practical art, the treatise must have reference to some given condition of climate and country. The following quotation will convey an accurate idea of the author's opinion of the best mode of treating his subject: —

"Agriculture, like every art, is founded on principles; and a natural method of studying it would seem to begin with principles, and from these to deduce the rules of practice. The nature of the subject, however, or rather the state of our knowledge, admits of this course being followed only to a limited extent; for the art founded on experience is often better understood than the principles; and while the science is in some degree incomplete, the art has, in many things, been rendered very perfect by experience alone. Hence, it is well to lay the foundation of the study of agriculture on a knowledge of practice. In this case, the agriculturist, should he desire to extend the range of his observations to the relations of the science with the practical art, will do so with a more useful result and less hazard of error. In the following work, which is designed in an especial manner for those who are to engage in the study of agriculture for the first time, I propose to observe the plan of instruction to which I have referred. One condition of climate and country is assumed; and there is explained, in so far as the limits of an elementary work will allow, a system of agriculture, which is conceived to be good, which is founded on experience, and which is capable of being reduced to practice. It does not, therefore, consist with the design of this work, to detail a number of practices, or examine a number of opinions; many of which may be good, and yet not in accordance with the system to be explained. Farther, the attention of the reader is mainly directed to the essential parts of practice; and, while the connection of agriculture with other branches of knowledge is carefully pointed out, this is, in most cases, done rather to show the relation between them than to pursue the subject in detail. The application of science to agriculture affords the materials of interesting and useful study. Chemistry ascertains the nature and constitution of soils, the mode of action of manures, and the substances fitted for the nutrition of plants; botany and vegetable physiology treat of the structure, the properties, and the uses of plants; animal physiology and medical science relate to the form of animals, their properties, and diseases; and mechanics are applied to the construction of machines and rural works. But there are branches of agriculture which may be separately studied: they are not essential, as experience shows, to the knowledge of agriculture as an economical art, and need be but partially treated of in an elementary work. Notwithstanding, however, this limitation in the design of the present treatise, it will appear that it is sufficiently extended for those who enter for the first time on the study of agriculture; and that even a rudimental knowledge of so many subjects as it embraces cannot be acquired without the labour of patient study." (p. ix.)

The reader will be prepared, by these remarks, to meet with a description of the most approved practices employed in the agriculture of the best districts in Scotland, unmixed with hypothetical speculations: and this is precisely what the book is. The descriptions are perfectly clear and distinct; and they are illustrated by upwards of 200 engravings on wood, chiefly of implements. No notice is taken of the new theory of the rotation of crops, or of the doctrine of *humin*, though so much has been written respecting both in the *Quarterly Journal of Agriculture*, of which, Professor Low informs us, in a note, he was for some time editor. Perhaps, indeed, we ought not to be surprised at this, after seeing the wild speculations to which these new theories have given rise. We cannot help thinking, however, that Decandolle's theory ought to have been stated; because many observing cultivators might have been induced, by such a statement, to direct their attention more specifically to the subject of rotations. Other swing ploughs, we think, should have been noticed as well as Small's; and we expected something on the subject of wheel ploughs, though, as far as we can observe, there is not a word respecting them in the book. Several pages are very properly given on the improvement of the breeds of animals; and, we think, there ought also to have been a section on the improvement of the breeds of plants. We admit, however, that this and similar other matters, which we could point out as in our opinion desirable in a work intended for students, formed no part of the author's plan; and therefore, perhaps, all that we ought to say is, that, in these respects, the book is not precisely what we think it ought to have been, as coming from a teacher of agriculture. Taken as a practical director of Scotch farming, we consider it unexceptionable.

ART. IV. *Catalogue of Works on Gardening, Agriculture, Botany, Rural Architecture, &c., lately published, with some Account of those considered the most interesting.*

BRITAIN.

PAMPLIN, William, jun., Lavender Hill Nursery, Wandsworth Road, near London: A Catalogue of old Books on Botany and Gardening, offered for Sale at the moderate prices affixed. Part second. 8vo. 1834.

The number of books enumerated in this catalogue is 276; a few of them are scarce, and some others are illustrated by portraits. The author collects and dries specimens of plants for sale; and has sent us some for our inspection, very beautifully dried, and carefully displayed and attached. He also undertakes "to supply portraits for illustrating botanical and horticultural biography, &c., and botanical figures, either engravings or original drawings." We recommend him to amateurs.

Murray, Hugh, F.R.S.E., &c., assisted by Wallace, Jameson, Hooker, and Swainson: An Encyclopædia of Geography; comprising a complete description of the earth, physical, statistical, civil, and political, &c. Illustrated by 82 maps, and upwards of 1000 engravings on wood, representing the most remarkable objects of nature and art, in every region of the globe. 8vo, pp. 1567. London. 3*l.*

When it is considered how much the nature of the cultivation of every country depends on a knowledge of its geography; that is, of its climate, elevation above the sea, proximity to or distance from the sea, irregular or even character of the surface, soil, and indigenous vegetation, our gardening readers will not be surprised that we should recommend to them a work in which all these matters, and every other which the subject embraces, have been treated in a manner far superior to that in which they could have been done, at any former period, in this or in any other country. It is quite enough for the gardener to know that the botany of every country is given by Dr. Hooker; and what relates to its soil and surface, geology, &c., by Professor Jameson. Among the woodcuts, most of the remarkable plants of every country will be found beautifully figured, as are also the remarkable animals; so that, even as a work of natural history, it possesses extraordinary claims to attention. Altogether, we consider it as one of the most useful books, and also, as one of the cheapest, which has appeared in our time. Next to foreign travel, there are few things which tend more to liberalise the mind, than the study of geography, when combined with such historical and domestic notices as are given in this work.

FRANCE.

Tessier, M.: Annales de l'Agriculture Française; contenant des Observations et des Mémoires sur toutes les parties de l'Agriculture et des Sciences accessoires. In monthly numbers. Nos. 81. and 82., vol. xiii.; third series. 8vo. Paris, 1834.

This work, of which we possess some of the earlier volumes, still continues to be a record of the transactions of the Central Agricultural Society of France. The most interesting article in No. 81. is on the culture of the cochineal insect, and that in No. 82. on the culture of cotton; both articles being doubtless prepared with a view to the agriculture of Algiers. We observe that this Society has done us the honour to insert our name in the list of associates; and also that Oscar Le Clerc's translation of our *Encyc. of Agr.* is nearly completed, in 4 vols. 8vo, with 2000 woodcuts.

De Moléon, J. G. V., of the Polytechnic School, Civil Engineer, Chevalier of the Legion d'Honneur, &c.: Recueil de la Société Polytechnique, renfermant, 1°, Le Recueil Industriel, Manufacturier, Commercial, de la Salubrité publique, et des Beaux Arts; 2°, L'Agronome Manufacturier; 3°, Les Annales de la Société Polytechnique; 4°, Les Annales des Statistiques et les Actes de l'Administration propres à encourager les diverses Branches de l'Economie publique, &c. Paris. 2d series, commencing January, 1834.

BELGIUM.

Lejeune, A. L. S., M.D., &c.; *et Courtois, R.*, M.D., Horti Botanici Academiæ Leodiensis Directioni adjunctus; conjunctis studiis ediderunt: Compendium Floræ Belgicæ. Tomus i. 1828; tom. ii. 1831. 8vo. Liege.

These volumes include brief technical descriptions, in the Latin language, of those of the wild plants of Belgium which are referable to the first fifteen classes of the system of Linnæus, herein followed. A third volume, designed to contain descriptions of the remainder of the Belgic phanerogamic plants, is under preparation. The two volumes before us are very carefully elaborated; and must much avail the botanical students in Belgium. They are also capable of interesting the students of the native plants of neighbouring countries, as teaching the species peculiar to each country respectively. We observe that not a few species are described, which inhabit Belgium, that do not occur in Britain.

ART. V. *Literary Notices.*

A TREATISE on Fruit Trees: by an old Pomologist, a contemporary of Miller, Aiton sen., Forsyth, Hill, Abercrombie, &c., and whose experience has been gained in the gardens of royalty, and in those of the nobility and gentry, in different parts of the kingdom. The author has also been, for many years, a nurseryman; in which business the propagation and culture of fruit trees have been his principal employment; and he has particularly devoted his attention to ascertaining the names and merits of each variety of fruit, with the best modes of culture.

Report of the Doncaster Agricultural Society, on the Turnip Fly, founded on the returns received from upwards of a hundred gentlemen, cultivating turnips on every variety of soil in the county.

The Agricultural Magazine is about to be published at Dundee, in monthly numbers, at 6*d*. each.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

The fæcal Excretions of Plants. — The committee of botany of the British Association for the Advancement of Science have requested Professor Daubeny of Oxford, "to institute an extended enquiry into the exact nature of the secretions by the roots of the principal cultivated plants and weeds of agriculture; and that the attention of botanists and chemists be invited to the degree in which such secretions are poisonous to the plants that yield them, or to others; and to the most ready method of decomposing these secretions by manures, or other means." Dr. Lindley has also proposed the same thing as a desideratum.

The Cause of Malaria, in the pestilential districts of Italy, has generally been supposed to be the decomposition of vegetable matter on a moist surface. This, however, is to confound the malaria with the marsh fever. The former is now thought to proceed from a very different cause, and to be analogous to what in England is called the hay fever. It is found that, while the corn or hay crop is in a growing state in the pestilential districts, they are as healthy as any part of Italy; but that, the moment the crop is cut down, or withers on the ground, the malaria commences, and continues through the autumn and winter, till vegetation becomes vigorous in the following spring. The neighbourhood of Rome, where malaria is so prevalent, "is very hilly, dry, and entirely without vegetation. For days together, one sees nothing but desolate dried up corn fields, without trees, bushes, or wood of any description. In early times, Rome was surrounded by extensive sacred woods, which were not suffered to be destroyed. At that period malaria was unknown, though intermitting fevers were well known in the Pontine Marshes. The avarice of the popes, however, converted these sacred woods into gold, and so desolated the region that not a tree or wood is to be met with around Rome. With the commencement of this system of extirpation the malaria appeared, and has at length reached such a height, that, yearly, many are carried gradually off by it; and, in the summer months, strangers and respectable inhabitants quit Rome. When we take into consideration all the phenomena of marshy districts, the conclusion does not lie far distant, that the atmosphere is in different degrees rendered unfit for human organisation, not by the passage of the water to the air, but by the decomposition and solution of vegetable substances; and that thus those various intermitting fevers, and even the plague itself, are produced. In the case of real malaria, in opposition to marsh fevers, the circumstances are different. So long as the earth is covered with living vegetables, as, for example, with corn, the air of the most suspected district is pure and healthy, and no one fears being attacked by the disease; but, when the prodigious crops, which in those volcanic loose-soiled districts are speedily brought to maturity, are removed, does the surface of the earth become dead at the warmest and most energetic period of its functions? or does not rather a portion of those substances, which were consumed by the leaves and roots of plants, now go to the atmosphere, and render it unfavourable for the breathing of man, until all is again restored to an equilibrium in higher or more distant regions? That carbonaceous matter is beneficial to the vegetable kingdom, is as well known as that it is prejudicial to the breathing process in animals. No educated person in Germany doubts the organic function of the earth, to which also the cholera itself has been ascribed; and when a more general regard to nature advances to the south, the sacred woods will again gradually surround Rome, large vine branches entwine themselves round the elms, the hills be thus again covered, and the malaria reduced within limits. The fact is not without interest, that all real malaria districts are of volcanic formation, and that they are often to be found at the boundary of volcanic and non-volcanic rocks." (*Jameson's Journ.*, vol. xvii. p. 167.) In several districts in England, the country people are liable to attacks of fever immediately after the removal of the hay crop, some individuals much more so than others. This may be considered as a species of malaria of a comparatively mild description.

A Mode of packing Fruit Trees for Exportation is given in VI. 311. I received last month a package of fruit trees from Boston, North America, from Mr. W. Kenrick; whose *New American Orchardist* is reviewed in IX. 354. I send a description of Mr. Kenrick's mode of packing, which I think an approvable one, for publication. He lays the roots in wet moss, and this is secured by means of bast mats, not only about the roots, but clear from the stems. A strong stake is placed in the centre of the bundle of trees, and these are well packed in straw, and bast mats, not put into a box. It appears to me that this mode is preferable to packing the trees in a box; for, when the roots are packed in wet moss, and the branches are laid bare in the box, a considerable degree of damp arises from the moss, and stagnates upon the branches, to the destruction of some of the trees, as when the trees are unpacked and exposed to the air, the branches of some of them turn black and purple in several places, and the trees soon die. On the contrary, when the trees are not packed in a box, the dampness from the wet moss is allowed to escape, and the branches are not injured by the stagnation of it upon them. The trees I have received from Mr. Kenrick were not at all affected in their branches, but were perfectly free from all disease, and the branches of the pear trees had sent out young shoots among the straw. The following are the names of the kinds of fruit trees which I have received from Mr. Kenrick: all of them are described in his *New American Orchardist.*

Apples: American summer pearmain, Benone, St. Lawrence, Maiden blush, Summer queen, Summer rose, William's apple, Aunt's apple, Kenrick's red autumn, Killam Hill, Newark king, Hubbundston's Nons, Marquise, Peck's pleasant, Penock red winter, Priestley, Royal pearmain.

Pears: Julienne, Dix, Gore's, Heathcot Lodge, Wilkinson, Lewis, Thomson, Cushon. — *M. Saul. Sulyard Street, Lancaster, June* 7. 1834.

Messrs. Audibert's Mode of packing Plants to be sent to great Distances. — The boxes in which the plants are to be placed are first lined with double oiled paper, to prevent the access of air and the escape of moisture. Moss, after being slightly watered, is then stuffed in about the plants, and the lid is put on in such a manner as to be air-tight. Messrs. Audibert are of opinion that plants in a dormant state, such as vines, may be sent in this state to any distance in temperate climates; and even to the tropics, provided a mixture of soil or sand were put in along with the plants, for the shoots to run in, that would be produced by the tropical temperature. (*Busby's Vineyards of Spain and France;* an interesting work, which we shall review in our next No.) By this mode of packing, or that suggested by our correspondent, Mr. Ward, p. 207., it appears to us that there will henceforth be no insurmountable difficulty in sending out to, or bringing home from, Australia, India, or China, any description of plant whatever, whether in a growing or dormant state. Glass cases may be rendered perfectly air-tight, and yet admit of the contraction and expansion of the air, by having a small reservoir of water for the expanded air to act upon. — *Cond.*

ART. II. *Domestic Notices.*

ENGLAND.

THE Devon and Exeter Floricultural Society has introduced a new subject of competition into the flower shows, by offering a prize for the best specimen of flower-painting done by a lady. — *J. W. L.*

The Grounds at High Clere have been in great beauty, notwithstanding the calamities of the spring. The very mild weather in January, February, and March, brought forward the whole mass of the *R*hododéndron álta-clerénse hybrids; when, just as they were covered with turgid umbels ready to expand, came the frost in April, and destroyed hundreds of the buds. It was quite a floricultural calamity. Even the more tardy umbels were injured, many of the florets in each being spoiled. Then we had a great fright; for in many of the specimens the bark split and came off, disclosing the naked stem: these, the gardener swathed in haybands, expecting them to die to the ground, but they have quite recovered; the bark is regenerated, and the plants are growing surprisingly. Next year the show will be immense, and such a concatenation of premature warmth and frost can hardly happen a second time soon. The azaleas were very superb, and some of the latest are even now in flower, perfuming the air with their fragrance. — *R. High Clere Park. June* 27. 1834.

Syon House Gardens. — Mr. Thompson, late of the Grange, who succeeded Mr. Forrest in the management of these gardens, has in his turn been succeeded by Mr. Carton, late of High Clere. We hear that the same system of rigid exclusion, even of gardeners, is still to be maintained.

The numerous fine I'lices at Mamhead, near Exeter, appear, from some letters found a short time ago in taking down the old house there, to have been planted in 1718; in which year, as I was informed, the safe arrival of them from Smyrna or Aleppo is mentioned. — *W. C. Trevelyan. Athenæum, Pall Mall, July* 9. 1834.

The new Evergreen Lucombe's Oak, mentioned by Mr. Rutger (p. 185.), is known here, and in some other nurseries, as the Narrow-leaved Lucombe, or Fulham, oak. It is a beautiful variety, retaining its dark-green foliage, in mild winters, till April or May. — *T. Rivers, jun. Sawbridgeworth, May* 23. 1834.

Of the Red-corollaed Nelúmbium *speciòsum, of* A'bies *spectábilis* Lam. (P*ìnus* Webbiàna *Wall.*), *and of the* Cèdrus Deodàra, we have received seeds from Dr. Wallich, since we noticed, in p. 278., the receipt of other seeds from him. In this instance, some of the seeds of the Cèdrus *Deodàra* were sent in a portion of a cone, and some in a vial: neither these nor those look very promising, but those in the cone look most so. Scarcely a seed is without one or more blisters of oil beneath the integument, as in those described in p. 278. All the seeds of *A*'bies spectábilis seem dead, and are so dry that their embryo is a mere shriveled thread. The seeds of the *Nelúmbium* are noted for very long retention of life, and we have imparted Dr. Wallich's plentiful supply of these to various heads of botanic gardens, and to nurserymen, and added to them portions of the seeds of the *A*'bies and *C*èdrus, that those who are hopeful of their growing may have an opportunity to do their best with them. Upon the cover of our Number LII., we have, through inadvertence, announced the seeds of the *Nelúmbium*, as additional ones of the white-corollaed variety, but we found them, on opening the package, to be seeds of the red. The date upon the labels to the seeds is October, 1833: we received the seeds on June 27. 1834. — *J. D.*

A Species of Tacsonia has been in flower nearly the whole of the winter on a west wall in the open garden at Englefield House, near Reading. Mr. Greenshields has promised us an account of it, and in the meantime plants may be obtained at Mr. M'Arthur's nursery, Connaught Square, Edgeware Road.

A Selection of Heartseases, painted by Mrs. Withers, has lately been exhibited at the Horticultural Society's rooms, and also shown to us at Bayswater, The varieties are beautiful, and they are most exquisitely painted. An eminent artist happened to call while they were before us, who declared that he had never seen any work of the kind so beautifully executed. There can be no question of the high talents and great industry of Mrs. Withers. The artist we alluded to has the same objection as ourselves to the mode of mixing the different varieties together, adopted by Mrs. Withers, in common with the growers of florists' flowers, instead of arranging them according to their affinities. Mrs. Withers states that the flowers were placed in the order she drew them, by her employer; but this lady, and all other artists, should endeavour to correct the taste of their employers, in matters connected with their profession. We wish our able correspondent, Calycanthus (who we have no doubt is an artist), would take up this subject, and would enlarge on it from time to time. — *Cond.*

Cultivated Kinds of Rose budded in Hedgerows upon wild Kinds there growing. —I, last summer, budded the wild roses growing in my hedgerows with buds of some cultivated kinds; the flowers from these are now coming into blossom; their hues and odours must increase the interest of the hedgerows. A mention of this matter may induce others to increase the interest of their hedgerows in like manner. — *M. Saul. June* 7. 1834.

A Plant of Heraclèum *gigantèum*, grown in Lavender Hill Nursery in 1832, measured as follows: —Extent of the two lower leaves from point to point, 12 ft.; height of the plant, 10 ft. 3 in.; circumference of the stem at 2 ft. from the ground, 1 ft.; diameter of the main umbel, 2 ft.; diameter of a partial umbel of ditto, 3 in. These dimensions were taken by — *William Hurst. Wandsworth Road, July* 10. 1832.

A Verbascum in the garden of Mr. Wilson of Greenhithe (see p. 283.), and nursed by Miss Wilson, had attained, July 27., a height of upwards of 12 ft., and was still growing.

The Number of Plants observed in Blossom last Winter at Holnicote, in Somersetshire, the seat of Sir Thomas Acland, were on Dec. 23. 1833, 236; and on Feb. 3. 1834, 181, as appears from the lists of them sent by him to the Devon and Exeter Horticultural Society. — *W. C. Trevelyan. Athenæum, Pall Mall, July* 9. 1834.

Bignònia *ophthálmica.* — Having received a supply of seed of the Bignònia ophthálmica, or eye vine, known to the Hispano-American inhabitants of Carthagena by the name of *Bejuco de Ojo*, which is so justly celebrated for its efficacy in the cure of ophthalmia and other inflammatory affections of the eyes, I send some to you for distribution among those who are most likely to succeed in making it vegetate. This will, perhaps, be facilitated by previous maceration either in plain soft water kept at a moderate temperature for about forty-eight hours, or in water acidulated with either chlorine, or a saturated solution of oxalic acid, in the proportion of sixteen drops to the pint, or one drop to the ounce by measure, of water. In this proportion, I have found the oxalic acid, as recommended by M. Otto of Berlin, effectual in rousing the dormant powers of vegetation, and quickening the developement of the infant plant. But when oxalic acid has been used, I think it will be advisable, in general, to wash the seed, before planting, in water either pure, or containing a small quantity of lime, potass, or some other substance capable of forming a neutral salt with any adhering acid, so as to prevent any injurious action it might exert upon the embryo springing into life. It will also be necessary to guard against the depredations of slugs and other vermin, which devour the young and tender plants of the eye vine with avidity. — *Wm. Hamilton. Plymouth, May* 20. 1834.

[We have sent the whole of the seeds to Messrs. Low and Co. of the Clapton Nursery. — *Cond.*]

O'xalis crenàta. — Should you have received any account of the late exhibition at Falmouth, on the 28th of last month, you will have learned that one of the greatest difficulties attending the cultivation of the O'xalis crenàta has been surmounted; Mr. Pringle, the intelligent and enterprising gardener of L. C. Daubuz, Esq., of Truro, having upon that occasion produced a dish of the tubers of this plant, the growth of the present year, which were much admired both for their size and beauty. Mr. Pringle will, I trust, communicate the process by which he has succeeded in obtaining this desirable result, through the medium of your valuable Magazine, to the public for general information. You will also have learned from that report (inserted in the *West Briton* of the 30th of May) that Sir Charles Lemon, with that zeal for science, and that desire to promote the interests of society, for which he has ever been so honourably distinguished, has this year attempted the field culture of these tubers upon a large scale: the result of so important an experiment will not, I trust, be kept from the public, even should its success fall short of our most reasonable expectations. — *Wm. Hamilton.* 15. *Oxford Place, Plymouth, June* 13. 1834.

The Victoria Wheat. — It may be interesting to many of our readers to learn that, in several instances, both in this neighbourhood and that of Bristol, the Victoria wheat, received from Sir Robert Ker Porter, has been in ear for some weeks, and promises to be ripe before the wheats in ordinary cultivation show their blossom. A letter from my friend, W. P. Taunton, Esq., of Stoke Bishop, near Bristol, of the date of the 25th of April, says: — "Your six grains of Victoria wheat have produced six healthy plants, which have spindled, and are swelling in the upper part of the stem, indicating the existence of an embryo ear; but they have not, either of them, thrown out a single sucker, so that I have had no means of dividing and multiplying them, and look only to the produce of seed for their increase." Mr. Richard Barret, an ingenious and industrious horticulturist, residing at Portland Place, Morier Town, to whom I gave three grains last year, succeeded in raising as many plants, two of which were unfortunately destroyed by cats; but the survivor, a fine healthy plant about 4 ft. high, has been in ear since the latter part of April, and has been in blossom for the last fortnight: the ear is as large and full as that of other wheats. At Newbury, Sir Edward Thornton, I understand, has several plants raised from seed which I gave him, in ear.

On the 24th of August last, the day after I first received the seed from Caraccas, I sowed a few (I think three) grains in pots. The whole of these grew, and one plant, in particular, flourished vigorously, tillering out and attaining a height of above 3 ft. During the winter, however, either from my mismanagement, or from a want of space to expand its roots in the pot, it suddenly became sickly, and died. Another plant, which I removed in the latter part of the year to my garden, was destroyed by a man who was employed to put the garden in order, and to whom I forgot to give a caution respecting this plant. Thus my stock was reduced to one starved plant which continued alive, but made little progress during the winter, if winter it could be called, in which we had but two, or at the most three, nights' frost, and no snow even for ten minutes' duration. At length, on the 26th of February, I turned this plant out to take its chance, conceiving the period of greatest danger past. The weather, however, during part of March, and nearly the whole of April, was colder; we had more nights of frost, and of greater intensity, than during the period which preceded its being planted out. Yet from that period it began to grow, and, although a dwarf plant growing in a wretched soil, it flourished beyond my expectation. Hearing of Mr. Barrett's plant being in ear, I was induced to call and see it on the 29th of April; and, on the following day I examined my own plant, the ear of which, to my no small surprise, I found protruding above the vagina; and on the 16th inst. I observed it in flower. I have two other plants sown in pots, after twenty-four hours' maceration in soft water, on the 2d of March, at the same time with two others which had been macerated for an equal length of time in a saturated solution of oxalic acid. The latter never sprouted. I omitted to register the date of the first appearance of the others; but on the 1st of April I transferred them both to the open ground, where they are flourishing vigorously, and show symptoms of coming soon into ear. One of them has three fine suckers. Since I began this letter, I have been informed that some Victoria wheat, which I gave to Mr. John Jarman here, and which he sowed on the 1st of February last, is now (May 20.) in the ear, and has been so for some weeks. — *Id.*

Yucca Starch. — Mr. Watts has sent me a sample of yucca starch, which, he says, a friend assured him was equal to carpenters' glue; and which can be purchased at Carthagena for 1½*d.* the Spanish pound: he also sent me some manteca de corozo, or palm oil, which is used for lamps, and which may be had at Carthagena for 8*s.* per gallon, or 50 dollars per tun, of 252 gallons; while seal oil sells here for from 110 to 120 dollars per tun, or above 100 per cent dearer. Mr. Watts wishes for information as to how far these might be productive objects of commerce. Every addition to our imports from South America not only first, to civilise the inhabitants, and put an end to those distractions, which every friend of humanity must deplore; but to promote industry and sobriety of habits among the inhabitants; to give employment to a large quantity of British shipping, and a greater number of sailors; to improve the receipts of our customs; and provide an abundant market for our manufactures, upon which the doors of the European market are gradually, but with too fatal a certainty, closing, and which the insane and suicidal proceedings of the Trades' Unions are so blindly assisting our rivals in trade and manufactures to close. Hence, it has long been my wish and endeavour to divert the tide of British industry, and domestic as well as colonial enterprise, into new channels which cannot be so readily closed; and in which we have little to apprehend from successful rivalry. This has been the incessant aim of my foreign correspondence for the last ten years, and in this object I have been ably and generously seconded, both by Mr. George Watts, and his ill-used father. If our success has not been proportionate to our wishes, the fault does not wholly rest with us. — *Id.*

Fifty Barrels of ground Dividivi are expected in England, from Carthagena, in the course of July; and Dr. Hamilton, at Plymouth, has instructions to dispose of them to the tanners. The intrinsic value of the dividivi is nearly half as much again as that of the best Aleppo galls.

A large and handsome Cucumber was brought to us on Aug. 2. by Mr. Cuthill, gardener to L. Sullivan, Esq., of Broom House, Fulham. It was grown on what is called Wheedon's plan, with this difference, that it was planted in the pit of the house amongst old tan. A single stem was trained up an iron rod 7 ft. in length, to the roof trellis. When it reached the trellis, it was stopped, to cause it to branch out; and by degrees, as the shoots spread over the trellis, all the leaves were taken off the stem from bottom to top, leaving it quite bare. In this state the stem measured 1¾ in. in circumference at the distance of 7 ft. from the roots. The leaves on the branches were generally about 19 in. by 15 in.; and the cucumbers produced from 15 in. to 20 in. long; the latter being the length of that sent to us. It is straight, and varies little in thickness from one end to the other, averaging 6¾ in. in circumference. It weighs 1 lb. 12½ oz.

SCOTLAND.

Mr. Charles H. J. Smith, the son of our valued correspondent Mr. Smith, of Hopetoun House Gardens, has, we observe, commenced business as "Landscape-Gardener and Planner" in Edinburgh, and we sincerely wish him success. If he will exercise his talents in composing some designs and essays for this Magazine, and for our forthcoming *Encyclopædia of Landscape-Gardening*, it will fit him for rendering a reason to his employers for what he may recommend. In these thinking and reasoning days, the taste of no artist will be taken, as it used to be, on credit. When the late Duke of Northumberland asked the celebrated Brown on what principle he distributed single trees, his answer was, "I stick them in here and there as the maggot bites;" but no answer of this kind will do now-a-days.

The floricultural impostor noticed, p. 56., and in the preceding volume, appears to have been at work in the north-east of Scotland. In the *Elgin Courier* of May 16. and 23. are the following paragraphs: —

Floricultural Impostor. — We last week cautioned our readers against being imposed upon by a fellow offering to sell flower roots, and calling himself Mr. Green, from the new Vauxhall and Bowling-green Gardens, Aberdeen. It was well we did so, as we have since learned that he called on several proprietors of extensive gardens in the west country, but they were on their guard against being imposed on by him. We shall now give some details of his adventures in Elgin, as, by so doing, the public will be better able to detect him when he attempts to impose upon them. Mr. Green, alias Gern, alias Archer, &c., arrived in Elgin on Saturday the 8th of May, and called the same evening on Mr. Forbes, stating that he had taken Mr. Walker's nursery in Aberdeen, and that, as he wished to get himself introduced in the north, he would dispose of some fine georgina roots at 1*s.* 6*d.* each, although they were worth from 7*s.* to 2*l.* 2*s.* each. Although Mr. Green's knowledge of gardeners, and gardening in general, was such as to make it appear probable that he was what he professed himself to be, yet there was something about his manner which made Mr. Forbes resolve that he would not pay for any roots he might purchase until he saw them in flower. Mr. Green acquiesced in this, and said that he would let him have a dozen of roots on his paying the one half of the value now, and the other half when he came round again. On the following Monday, before Mr. Forbes had obtained the roots, the idea struck him that the person whom he had seen on Saturday was no other than the identical impostor alluded to in the *Gardener's Magazine*, p. 57. and 58.; and, as we had the loan of that work from him, he called for the purpose of examining it. We had previously seen Mr. Green, and it occurred to us at once that he was the very individual referred to; accordingly, we both prepared to ascertain if our ideas were correct. Mr. Green called soon after, when we immediately taxed him with being the impostor referred to, and, taking up the Magazine, we read the paragraphs referring to himself; but he strongly denied that he was the person, and threatened to prosecute us for saying so, although he allowed that he knew the individual mentioned, as he had seen him often. However, we still continued, notwithstanding his repeated assertions to the contrary, to be of opinion that we were right, and, as he found that he could not make us believe otherwise, he soon left us. In the course of the day, Mr. Green met with some of the journeymen gardeners, and by their assistance obtained a knowledge of persons who were fond of flowers; but he only succeeded in disposing of three of his georgina roots at 1*s.* 6*d.* each. In the evening he met several of the gardeners at the inn where he put up, and treated them to plenty of liquor, making engagements with them to work for him in Aberdeen. After staying four days at the inn, he left without paying one farthing, and nearly succeeded in obtaining a horse and gig along with him. (*Elgin Courier*, May 16.)

Mr. Green again.—We have received a letter, signed Thomas Green, bearing the Ballindalloch postmark, and dated the 17th of May, requesting that we would furnish him with the name of the author of the paragraph in our paper of the 9th inst., cautioning the public against being imposed upon by a fellow named Green, who pretended to have some very fine georginas to dispose of. If Mr. Green will take the trouble to visit Elgin again, we will not only furnish him with the information he requires, but also with farther information about a Mr. Green, the son of a bagpiper, and whose mother resides in one of our neighbouring glens, once celebrated for making fine whisky. Perhaps Mr. Thomas Green will allow that he has some knowledge of the Mr. Green we have referred to, as he did that he knew the impostor alluded to in the Gardener's Magazine; but, if he is ignorant on the subject, we can furnish him with his genealogy, and can mention many traits in his character not much to his credit. We can also furnish Mr. Thomas Green with some information respecting a Mr. Green, who wrote to a Mr. Paul three times, requesting that he would acknowledge that the said Mr. Green was left a valuable gold watch as a legacy by a near relation. But surely none of these stories can refer to Mr. Thomas Green of the Bowling-green and Vauxhall Gardens, with the 400 subscribers at one guinea each, which he has established in Aberdeen; a gentleman who has bills and property, as he says, to the extent of 51,000*l.* sterling, and who left a situation as curator to a botanic garden, where he had 2*l.* a day, that he might engage with Sir Michael Bruce for 36 acres of ground in the vicinity of Aberdeen, although he had not finally taken it, as Sir Michael Bruce would not agree to the removal of some nuisances. We think, were Sir Michael Bruce, or some of the other gentlemen whose names have been used to forward the views of Mr. Green, to take some steps to remove him from this country, they would be rendering a great benefit to society at large. (*Elgin Courier*, May 23.)

Botanical Garden at Elgin.—We have much pleasure in stating that Mr. Forbes has been busy this week in commencing operations for the formation of a Botanical Garden. In the present advanced state of improvement throughout Scotland, we have been surprised that Elgin did not possess something of the kind long before this time; but good things can never come too late, and we should be happy to see, not only a good botanical garden established here, but a society formed for giving prizes for the best flowers, fruits, and other gifts of nature, improved by the culture of man. Such a society, we believe, formerly existed here, but from some cause was given up. Since that time, however, a great difference appears to have taken place in the taste for flowers; and situations where we used to see no brighter flowers than kale rising to seed, are now decked with many of Flora's most beautiful ornaments. Let us, therefore, endeavour to form a new society for the farther encouragement of a taste for beautiful flowers, and we shall do more for the happiness of our fellow-creatures than all the temperance societies which have ever existed, by inducing the labourer and artisan to employ their leisure hours in improving their little spots of ground, instead of idling away their time. We might improve upon the plan of the former society, by having exhibitions quarterly in some pleasant spot near the town, instead of in the Assembly Rooms as formerly; and, if no better place can be found, we shall be happy to afford our own garden for that purpose. (*Ibid.*, May 23. 1834.)

Plants of the Forest Trees indigenous to Van Diemen's Land have been raised from seeds by Dr. Rolland of Montrose; and it is stated in the *Scotsman* newspaper of July 16., that Dr. Graham of Edinburgh thinks that one of them is likely to prove of so hardy a description, as to attain a considerable size in the open air in the climate of Edinburgh. It is stated to be a very beautiful plant, probably a eucalyptus. Dr. Rolland is said to be well acquainted with the flora of Van Diemen's Land, and to have a very interesting collection in his garden at Montrose. Should he see this, we shall be very much obliged to him for some account of his garden, and particularly for the name of the species which is thought (according to the *Report of the Highland and Agricultural Society of Scotland*, as given in the above paper) likely to endure the open air in Scotland.

The Wheat Grains from Caraccas, kindly sent by you last season, of the earliness of which so much was written in the newspapers, I sowed part of, at the same time with my field wheat, near the end of October. It stood the winter well, and came into ear on the 30th of May, just thirteen days earlier than common wheat in the same field. Although I never entertained extravagant notions as to having in this northern climate anything like two crops in a season, yet, if it ripens, as I trust it may, a fortnight earlier than the ordinary varieties, it may be of immense importance in the agriculture of this part of the kingdom, which is near the northern limits of growing wheat, if not nearly on a level with high-water tides. At this place, the highest elevation at which wheat can be cultivated with success, is 400 ft. above the level of the sea. It so happens that a farm on this estate, which I occupy, extends in height from 300 to nearly 800 ft., so that I have an excellent opportunity of proving whether the new wheat may extend the limits hitherto fixed for the culture of that important grain. One good thing I remark is, that it does not seem so liable to rust as many other varieties of that grain are on their first introduction. I will hereafter communicate to you its time of ripening, quality, and appearance of fertility; and, in short, will pay to it all the attention it may deserve. — *A. Gorrie.*

ART. III. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly number containing eight plates; 3*s.* 6*d.* coloured, 3*s.* plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly number containing eight plates; 4*s.* coloured, 3*s.* plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Sweet's British Flower-Garden; each monthly number containing four plates; 3*s.* coloured, 2*s.* 3*d.* plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

POLYPETALOUS DICOTYLEDONOUS PLANTS.

XLV. *Grossulàceæ.*

719. *RI`BES.*

5924a nìveum *Lindl.* white-*flwd.* ■ or 4 mr.ap W N.W. America 1827? C co Bot. reg. 1692
"Brought to the Horticultural Society, by Mr. Douglas, from North-west America:" the time when is not stated.

R. nìveum is of the appearance and height of the common European species of gooseberry, and it has some similarity to the *R.* triflòrum, an American species; but it is quite distinct from both. The berry of *R.* nìveum is of "about the size of that of the black currant [*R.* nìgrum], and of the same deep rich purple colour. It has altogether the appearance of a small smooth gooseberry; but its flavour is very different: it is entirely destitute of the flatness which is more or less perceptible in even the best gooseberries; in lieu of which, it has a rich subacid, vinous, rather perfumed flavour, which is extremely agreeable. The fruit is rather too acid to be eaten raw; but, when ripe, it makes delicious tarts, and would probably form an excellent means of improving the common gooseberry by hybridising." (*Bot. Reg.*, August.) *R.* nìveum, apart from these considerations, is an addition to the number of the hardy species of shrubs. Its flowers, white, pendulous, and small, are borne in pairs and threes from the centre of the clusters (each of two or three) of leaves.

LXXIII. Rosàceæ. A variety of rose, named the village maid, is figured in *The Floricultural Cabinet* for August, which has a flower of a middle size, full of petals, and these striped with longitudinal lines of a colour distinct from that of the ground; what the colours are is not stated: one can hardly believe them to be white and lavender, as depicted in the figure. "It is totally different from the York and Lancaster" (*R.* damascèna var.), and also from the rosa mundi (*R.* gállica var. versícolor). Mr. William Rogers of the Southampton Nursery possesses it, who has remarked that he purchased it from the collection of a French florist, under the name of village maid, and that "the magnificent appearance of the large full-headed plant, worked on a standard, has drawn forth the admiration of all who have seen it."

LXXVII. *Leguminòsæ.*

1262. PULTENÆ`A.

†10583 fléxilis *Sm.* flexile-*twigged* ꝛ ⊔ or 1½ ap.jn Y Port Jackson 1801. C a.l.p Bot. reg. 1694
Dillwỳnia teucriöìdes Sieber. The Pultenæ`a fléxilis of Sweet's *Flora Australasica*, t. 35., has glaucous leaves and hairy calyxes; and is a plant entirely different from the P. fléxilis *Sm.*, which is closely allied to P. polygalæfòlia *Rudge*: but the calyx of that species is interspersed with villous hairs, its leaves are smaller, and it is altogether a more abundant-flowering plant. P. euchìla *Dec.* has also smaller cuneated leaves, and a remarkable ample calyx; like, as Decandolle observes, Euchìlus *R. Br.*: and, to my view, especially like that of some Gompholòbia. (*A. Cunningham*, in *Bot. Reg.*, August.)

P. fléxilis *Sm.* is a small shrub with twiggy branches, which are garnished, in their upper part, with small shining leaves, and with yellow small flowers, one from the axil of each of most of the upper leaves.

*A*càcia hastulàta *Sm.* is figured in the *Bot. Mag.* for August, t. 3341. "The blossoms are delightfully fragrant, smelling like [those of] hawthorn." The figure of this seems to resemble, even to identity, the *A.* cordàta of some living collections: as, for one, that of Mr. Knight. (See p. 281.)

CXVI. R*utàceæ.*

3303. COLEONE'MA. (*Kōleos*, a sheath, *nēma*, a filament; from the groove in the claw of the petal, in which the sterile filament is, in some species, partly lodged. — *Hooker.*) Sp. 4. ?—
púlchrum *Hook.* beautiful ■ ⊔ or 6 ap.my Ro C. G. Hope? ... C p.l Bot. mag. 3340
Has long been cultivated, in the green-house of the botanic garden of Glasgow, under the name of Diósma angustifòlia: a name only of the gardens, and implying a character common to others of the genus. The plant comes unquestionably within the genus Coleonèma. — *Hooker.*

C. púlchrum "deserves a place in every collection, from its graceful mode of growth, and bright and conspicuous rose-coloured blossoms, which continue long in perfection. Our plant forms an upright shrub, 4 ft. to 6 ft. high, bearing numerous twiggy, slender, pendent branches, clad with leaves 1½ in. long, and slender, filiform, and tapering to a sharp brown point. Towards the extremity of every branch, in the axil of each leaf, is a rather large flower upon a short peduncle, with a corolla of five bright rose-coloured petals. The figure exhibits a branch consisting of four upright twigs, the most upper part of each of which is adorned with several flowers; and, as these are shorter than the leaves, and the points of the leaves stand out beyond the flowers, fancy may imagine them to be "a troop of swords drawn to defend" the flowers. (*Bot. Mag.*, August.)

CXXI. *Pittospòreæ.*

SO'LLY*A* heterophýlla *Lindl.* Mr. D. Don has described this plant in Sweet's *British Flower-Garden* for March, 1834, t. 232. In the number for August, there is the following corrective note relative to it: — "Having had an opportunity of examining samples of the fruit which ripened at Mr. Knight's during the past summer, I now find that it is a berry [the genus Sólly*a* was distinguished from the genus Billardièr*a*, on the assumption that the fruit of the former was a capsule; and, perhaps, on other points: the fruit of Billardièr*a* is a berry], and that its structure differs in no respect from that of Billardièr*a*; with which genus the plant must be again combined." — *D. Don.*

CXL. *Caryophýlleæ.*

1388. SILE'NE.
†11586 virgínica *L.* Virginian ♃ △ or 2 my.au S Virginia 1783. D p.l Bot. mag. 3342
Approaches to S. règia *Sims.*; but may be known from this by its smaller size, narrower leaves, smaller flowers, and bifid petals.

The beauty of this species leads one to desire that it were not so rare in our living collections. The stems of S. virgínica frequently exceed, in America, 2 ft. in height: they bear oblong, acute, glabrous leaves, and a panicle of flowers whose petals are of a scarlet colour: these stand clear of each other in the border of the flower, so as to produce a star of five rays; each petal is bifid at the tip. (*Bot. Mag.*, August.)

DICOTYLEDONOUS MONOPETALOUS PLANTS.

CLXX. E*ricàceæ.*

1173. *ERI'CA.*
9667*a* codonòdes *Lindl.* bell-formed-*corollaed* ■ or 12 f.m Pa.Ro ... ... C l.s.p Bot. reg. 1698
Seems essentially distinct from *E.* arbòrea in its larger flowers, more slender leaves, less hardy branches, and truly bell-shaped corolla; which has by no means the globular form of that of *E.* arbòrea: its stigma is, moreover, very small, and not at all dilated or lobed, either when dried or recent. *E.* polytrichifòlia, which, we presume, is the *E.* arbòrea stylòsa of English gardens, is equally distinct in the same characters. — *Lindley.*

E. codonòdes *Lindl.* is stated to have the general appearance of *E.* arbòrea, but to differ in the particulars above quoted. "Our drawing was made from specimens communicated to us by Mr. William Wood, nurseryman, of Maresfield, in Sussex, who informs us that the species is quite hardy, and forms a bush from 10 ft. to 12 ft. in height. It begins to blossom in February, and continues till the end of May, disregarding both frost and snow, being often covered with flowers from top to bottom, and forming a most beautiful object. It is not, it is stated, very easily propagated. (*Bot. Reg.*, August.)

CLXXIV. *Campanulàceæ.*

607. CAMPA'NULA.
5054*a* gargánica *Ten.* ♃∼ △? ○? or ½ jl.au Pa.B Mt. St. Angelo 1830? S p.l Sw.fl.gar.2.s.252
There is a variety with smooth leaves, and one with hairy leaves. C. gargánica *Ten.* comes very near to C. *Elátines* *L.*, but appears to be sufficiently distinct. — *D. Don.*

The plant forms a little grass-green tuft, from which proceed many slender, branched, leafy stems of about 3 in. high. The leaves are kidney-shaped or heart-shaped, serrated. The flowers are disposed in a racemose panicle. Corolla wheel-shaped, and of a cobalt blue colour. The species is admirably adapted for a rockwork, and appears to thrive best in a mixture of peat and loam. It is readily increased by division [?]. As the plants of this species are apt to be injured by too much wet, some of them should be kept in a frame during winter. Plants of it have been raised in the Bishop of Rochester's garden, at Bromley. The figure has been derived from a plant communicated by Mr. Mallison, at Sir S. Scott's at Sundridge Park. (*The Brit. Flow.-Gard.*, August.) Mrs. Marryat has a plant. (See p. 340.)

CLXXXVI. *Compósitæ.*

2337*a*. DIPLOPA'PPUS *Cassini.* (*Diploos*, double, *pappos*, pappus; fruit furnished with a double row of bristles.) 19. 2. Sp. 4. —
incànus *Lindl.* hoary-*herbaged* ♃ △| or 2 aut LI.Y California 1832. C s.l Bot. reg. 1693
"It is easily known from D. linariæfòlius and its allies by its hoary leaves and soft flower-heads, which have the leaflets reflexed at the points in a squarrose manner, and covered with minute semitransparent glands."

D. incànus is a handsome, half-shrubby species, discovered in California by Mr. Douglas, by whom seeds of it were sent to the Horticultural Society, in 1832. Its heads of flowers have their rays of a rich lilac, and their disc of a bright yellow. It grows freely in summer, in any hot exposed situation. During winter it should be protected in a frame. (*Bot. Reg.*, August.)

CC. P*olemoniàceæ.*

499. GI'LI*A* †4265 coronopifòlia *Pers.* (raven-footed-leafed Gília) is figured in the *Bot. Reg.* for Aug., t. 1691. Synonyme, besides the synonymes quoted in *Gard. Mag.* IX. 705., Ipomópsis picta of the French gardens.

Gíli*a* coronopifòlia *Pers.*, though delicate, is tolerably easy to cultivate, and produces its seeds in some abundance, while the closely related G. aggregàta *D. Don* (see X. 70., G. pulchélla of others), which much resembles it, is so impatient of cultivation, that it is already nearly lost from our gardens. Both species are equally handsome. (*Bot. Reg.*, August.)

CCVII. *Primulàceæ.* Lubíni*a* atropurpùrea. Mr. Maund has figured this plant in his *Botanic Garden* for August, fig. 461., and there given some account of it. We quote as follows: — "On examining the deep crimson petals of the Lubíni*a* under a magnifier, we observed a number of minute pearl-like substances, spread over their whole interior surface. Its crimson filaments were also similarly gemmed. They appeared as grains of farina, fallen from the anthers; but a comparison showed them to be evidently brighter. This induced the application of a more powerful magnifier. The result was gratifying. The inner surface of the rich coloured petals, and the filaments also, were now seen to be adorned with prominent glands, each a little globe on a cylindrical pedestal. On the sun's rays being fully reflected on a small portion of a petal, it instantly became a most dazzling object; a groundwork of fine crimson studded with brilliants. The most apathetic may exclaim, Wherefore this labour? wherefore this great splendour and beauty? That these glandular appendages have certain uses in the economy of the plant, none dare deny; but what they are, all are equally ignorant."

CCXI. *Scrophularíneæ.*

3468. LOPHOSPE'RMUM.
Rhodochìton *D. Don* red-calyxed ⌇ ⌊__⌋ or 10 jn.o D.P Mexico 1833. S p.l Sw.fl.gar.2.s.250
"Rhodochìton volùbile *Zuccarini.*" — *D. Don.*
Rhodochìton volùbilis *Gard. Mag.* X. 346. 411.

This is the Rhodochìton volùbilis, of which mention is made in p. 346. and 411. "It is clearly," says Mr. D. Don, "a legitimate species of Lophospérmum." A climbing suffrutescent plant, with stems slender and branched, the younger branches dark purple. Leaves stalked, heart-shaped, acuminate; apparently not so large as those of L. erubéscens. Flowers axillary, one from an axil, pendulous. Peduncles slender, from 3 in. to 5 in. long. Calyx large, bell-shaped, widely spreading, membranous, pale purple. Corolla funnel-shaped, of an intense purple, 1½ in. long, clothed with white glandular hairs. This very beautiful climbing plant is a native of Mexico, and was introduced to Germany about two years ago; and, from the royal botanic garden at Berlin, it has found its way into the collections of this country. The figure published has been derived from a fine plant which blossomed in Mrs. Marryat's collection, at Wimbledon, in June last. The species may be propagated both by seeds and cuttings, and will require the same treatment as the L. erubéscens, and is apparently quite as hardy as that species. (*The Brit. Flow.-Gard.*, August.)

CCXXI. *Labiàtæ.*

1669. STA'CHYS § Amblela *Bentham* in Labiat. Gen. and Sp.
inflàta *Benth.* inflated-*calyxed* ħ △ or 2? jl.au Pk N. Africa? 1832. C s l Bot. reg. 1697

Stem half-shrubby, hoary, woolly. Leaves grey above, white and woolly beneath. Spike of flowers rather long; the "thin, half-transparent, light violet flowers, and neat hoary leaves, give the species a pleasing appearance." The corollas are rather, according to the coloured figure, of a pink colour, deepened, in parts of the border, into rose. S. inflàta is apparently hardy; but, in consequence of the last two winters, it is not safe to speak confidently upon this point. It has grown freely in common garden soil, in the open air, in the garden of the London Horticultural Society. It is easily propagated by cuttings. (*Bot. Reg.*, August.)

CCXXVI. *Hydrophýlleæ.*

477. PHACE'LIA. [Bot. reg. 1696
tanacetifòlia *Benth.* Tansy-lfd. ' ○ or 2 jn.jl? Light bluish violet California 1832. S co

"This is a more elegant and less weedy plant than the P. circinàta. The stems are suberect, not much branched. The leaves are pinnate, and have a large outline and pinnatifid pinnæ. The flowers, whose corollas are of a light bluish violet colour, are nearly sessile along one-sided spirally incurved racemes, forming together a dense dichotomous panicle placed at some distance from the upper leaves. The panicles are, according to the figure, placed each upon a peduncle 3 in. or more in length. P. tanacetifòlia is a native of California, where seeds of it were gathered by Mr. Douglas. In England it is a hardy annual, thriving in any soil or situation." (*Bot. Reg.*, August.)

MONOCOTYLEDONOUS PLANTS.

CCXXXVIII. *Amaryllìdeæ.*

979. ALSTRŒME'R*IA* oculàta *Lod.* (Bomàrea oculàta *Penny* in Gard. Mag. IX. 491.) is figured in the *Bot. Mag.* for August, t. 3344.

"The flowers of the present species, although, perhaps, smaller than those of any other species in the genus, are amongst the most desirable for gracefulness and beauty, and remarkable for the eye-like spot in the centre of each inner sepal. Forty-nine kinds of Alstrœmèr*ia* are enumerated in Schultes's *Systema Vegetabilium*, several undescribed ones exist in our herbarium, and others are to be met with in the stoves and green-houses of this country." (*Bot. Mag.*, August.)

CCXL. *Orchìdeæ.*

2547. DENDRO'BIUM. [Bot. reg. 1695
aggregàtum *Rox.* clustered-*pseudo-bulbed* £ ⍍ or 1 mr.ap Y India 1828. D p.r.w
"It belongs to a curious section of the genus; all the species of which have their stems shortened into the pseudo-bulbous form of Bolbophýllum, and thus form a natural transition to that genus." — *Lindley.*

The pseudo-bulbs are spindle-shaped and clustered, and about 2 in. high: the leaves 3 in. long. The raceme of flowers is produced from one side of the pseudo-bulb, is 9 in. or more long, devoid of flowers at its base, but in its upper part bearing from ten to fifteen flowers, which are of a pale yellow colour, with a portion of saffron colour towards the base of the labellum. The figure exhibits what we should deem quite an ornamental species. Trees in woods in the northern border of Arracan, and on the banks of the Chappadong river in the Gulf of Martaban, are native habitats in which this species has been found. "It appears to require as much heat and moisture as any of the Indian species: a circumstance which is explained by its inhabiting, when wild, the damp and sultry woods of Martaban. . . . . It has hitherto flowered only in the collections of Mr. Harrison and Mr. Bateman." (*Bot. Reg.*, August.)

CCLVI. *Aröideæ.*

2672. *CALA'DIUM.* [Bot. mag. 3345
†23489 grandifòlium *W.* large-leafed ʆ □ or 6 ap.my W Demerara, Caraccas 1803. C s.p
A'rum grandifòlium *Jacquin.* Not *Calàdium* grandifòlium *Sims* in Bot. Mag. t. 2643.
23489*a* Símsii Hook. Sims's ʆ □ or 6 ap.my W ... ... C s.p Bot. mag. 2643
Calàdium grandifòlium *Sims* in Bot. Mag. 2643. Not *A'rum* grandifòlium of Jacquin.

Now that I have seen a recent flowering specimen of the true *C.* grandifòlium, I cannot but come to the conclusion that Dr. Sims's plant is of quite another species, with leaves glossy on the upper surface, and having a broad semicircular sinus at the base with differently shaped lobes, and a spatha almost exactly resembling, both in form and colour, that of our *C.* fragrantíssimum; being red, and remarkably inflated below, and not pale green, and attenuated at the base. —*Dr. Hooker.*

C. grandifòlium *W.* is figured from the Glasgow Botanic Garden, where "it makes a truly handsome appearance; with its climbing and rooting stems, its large foliage, and pale spathas with a dark red line down the middle on the back." The stem is dingy green spotted with purple. The leaves are 2 ft. or more long, heart-shaped, arrow-shaped; petiole rounded, spotted with purple. Spatha at first pale green, afterwards pale buff; green at the base on the outside, pinkish within; marked at the back with a purple or dark red line. Flowers scentless. (*Bot. Mag.*, August.)

Miscellaneous. — Plants of *Bérberis* mìtis *Schrad.*, *B*étula grándis *Schrad.*, and of some other species, have arisen from the seeds sent, as noticed in p. 170., to Mr. Penny.

In the Nursery of Messrs. W. Young and G. Penny, at Milford, near Godalming, Surrey, the following species and varieties of plants were flowering on July 13. 1834: — *R*òsa bracteàta álba plèna *Penny;* Maria Leonida rose *Hort.*, introduced last autumn from Paris. This is a freely growing, abundantly flowering variety; its flowers are moderately double, and very fragrant; the petals white, slightly tinged with pink, the base of each yellowish. *L*òtus arenàrius and atropurpùreus; Diánthus attenuàtus; nova sp., allied to D. gigantèus, but the flowers of it are larger and brighter. Taxanthèma pectinàta, tatárica, pubérula, a new species allied to pubérula, nàna, and arbòrea; *Hy*péricum floribúndum, *G*enísta rhodópnoa, *C*ytísus racemòsus, *S*empervìvum cruéntum, *O*rnithógalum capénse; Fúchs*ia* grandiflòra, longiflòra, speciòsa, and præ'cox; Pterocéphalus Rhodocéphalus, Calceolària arachnöídea álbida, Lucùl*ia* gratíssima, Rhodochìton volùbilis [Lophospérmum Rhodochìton *D. Don*], Ipomœ'a Sellòw*ii*, *R*anúnculus créticus and cardiophýllus; Isopléxis canariénsis, glàbra, and var. pubéscens; *A*nthýllis tetraphýlla, *Petùnia* viscòsa and hýbrida, *A*strágalus falcàtus, Onònis angustifòlia, *S*piræ'a soròria, Cheiránthus longifòlius and mutábilis *Bot. Reg.*; Frankèn*ia* thymifòlia, *V*ìola palmaénsis, thus named from its inhabiting the Isle of Palma, one of the Canary Islands. We have succeeded in obtaining a fine hybrid between this distinct species and one of the finest varieties of pansies. From Cinerària cìma we have obtained some elegant varieties from seeds. — *G. P.*

Art. IV. *Queries and Answers.*

Absorption of Sap by the Roots of Plants; in answer to J. D. P. (p. 295.) — There are few things that can be more interesting and important to the gardener than an acquaintance with the laws and principles of vegetation; and it is pleasing to observe, that, limited as is our knowledge of phytological science (in comparison with others upon which an almost uniform opinion prevails), even *now* an attention to its principles will teach us the great propriety of instituting some new systems of management; and, what is of great importance, will furnish us with an incontrovertible answer to those who may have the right to ask, why in such and such a manner we conduct our operations. The great diversity of opinion that exists in relation to some phytological doctrines, though operating as a present inconvenience to the young enquirer, will ultimately tend to the advancement of the science and the practical improvement of gardeners; as every doubt that is expressed, and every query that is proposed for solution, will arouse our mental capacities, and teach us to examine, observe, and experiment for ourselves. Far rather would I seek after truth amidst diversity of sentiment, arising from investigation, than witness a unity of opinion arising from ignorance, or from thinking beings tamely submitting their judgments to some established authority. Hence the importance of such queries and statements as those proposed by your correspondent J. D. P. (p. 295.), in relation to the absorbing qualities of the roots of plants; upon which I beg leave to offer a few remarks, which, without positively denying, in all cases, the absorbing qualities of the large roots, will tend to show that the evidence adduced by your correspondent fails to satisfactorily establish generally such a proposition. I say generally, because I doubt if there are any principles in the science of phytology that can be laid down as universal, like a mathematical axiom: all we can do is to form, from practice and observation, general inferences, from which there are, or may be, exceptions, arising from the great diversity of habits, &c., which exist among different plants, and even among those of the same species when placed in different circumstances. The change effected by soil and situation is frequently so great, that it becomes difficult to identify a plant as belonging to its proper species. I have somewhere read that Sir J. E. Smith found the *Alopecùrus geniculàtus*, which generally has a fibrous creeping root, furnished with an ovate juicy bulb on the top of a dry wall. Thus the fact alluded to by your correspondent, allowing it to be generally correct, that plants, having large roots with few fibres, make the most luxuriant shoots, fails to support the hypothesis of the generally absorbing quality of the body of the root, inasmuch as no allusion is made to the circumstances in which the plants were placed between which the comparison was made, nor yet to the size of the spongelets; though these relative circumstances I conceive to be of much importance in determining the point. In a root possessing comparatively but few fibres, I have observed the spongioles to be as large as the quill end of a crow's feather; while in some with many fibres, the spongioles were so small as not to be easily distinguished. Thus, although embracing the spongiole system, we are not under the necessity of admitting that the plant possessing the greatest number of fibres will grow the most luxuriantly; since we know that a dense mass of fibres is frequently occasioned by an obstruction to the elongation of the root, or from the plant being situated in circumstances so unfavourable, that, to maintain itself in existence, it puts in exercise a wonderful accommodating principle, and, by multiplying its feeding or absorbing organs, accomplishes that which, by a few spongioles, however large, could not have been effected.

Your correspondent farther asks, how the success of the vines he had transplanted could be accounted for, "unless upon the supposition of the nutriment-absorbing quality of the large roots, as *all* (?) the fibres had unavoidably been destroyed." This, I consider, may be very easily accounted for, in unison with the spongiole system, merely by viewing the large roots as reservoirs of nourishment; by which I do not mean, as is yet too generally supposed, that, at the approach of winter, the sap descends and takes up its abode in the roots; what I mean is, that the root and every other living part of a deciduous plant contain, even when exposed to the stormy blasts of winter, a fluid which, if not flowing, is ready to be put in active motion by the genial warmth of spring. It is this fluid, acted upon by heat, that supplies the swelling and expanding bud; and, no sooner are the leaves unfolded to the agency of light than they repay the obligation by transmitting downwards the elaborated sap affording nourishment and increase to the plant; and, from the terminating fibres of the roots, or from parts somewhat analogous to the latent buds upon the stem, causing the protrusion of spongioles for the purpose of supplying a constant necessary addition to that fluid in the plant, which otherwise would soon become exhausted. I never met with an instance of a plant being covered with a luxuriant foliage, without its possessing at the same time beautiful spongioles. Even the shoots that rise from the stool of an ash or an oak, though luxuriating for a time upon the sap obtained from the root as a reservoir, soon demand a fresh supply, which they take care to provide for by the creation of absorbing organs. If your correspondent had closely examined the subject, he would have found that his vines did not flourish without possessing plenty of fibres and spongioles also; and he would have been led to doubt, whether the branchy parts of roots absorb "much more nutriment" than the trunk of a tree cut down in winter does, for the spray and shoots it frequently produces in the ensuing season.. It happens, unfortunately for your correspondent's hypothesis, that, though the vine loses frequently great part of its terminating fibres every season, it soon obtains very beautiful spongioles, when vegetation in the branches has commenced; provided the roots and tops are situated in nearly similar circumstances, as regards temperature.

I am supposing that your correspondent performed the transplanting operation after the fall of the leaf; and, although he would lose a great many fibres, it is not unlikely that an approach to an equilibrium would be made, by the pruning which the top would receive: and, merely in support of the spongiole system, I will mention a fact that came under my observation; which is, that, a gardener having lifted the roots of a vine, for the purpose of placing them more within the influence of the sun's rays, while the top was in leaf, the consequence was, that the next day the leaves were withered. The success in the one case, and the failure in the other, are easily accounted for. In the first case, we may almost be certain that the top of the vine was not left so bulky as it was the preceding summer; the organs of evaporation were consequently diminished, as well as the sponge-like vessels of absorption, while the gradual expansion of the leaves, and consequent transpiration from them, were soon followed by the gradual production of spongioles to supply that transpiration. In the latter case, the sap of the plant was in full motion, the leaves were perspiring and the roots were absorbing freely; the transplanting necessarily destroyed many of the supplying organs, while the leaves were exposed as before to the evaporating and decomposing influences of heat and light; and the mere possession of length of root and many fibres besides, with the assistance of watering, could not avert the consequence. Although aware, that all parts of a plant act and react on each other so as to form a complete whole, many seem to forget that there are certain circumstances necessary, before these parts can effect their reciprocal actions. Hence the failure of transplanted trees; hence the sickly appearance they long present, when they at length begin to recover from the operation, from the top being so much out of unison with the roots; and hence the failure of the vine I have adverted to. If the processes of decomposition and transpiration had in some measure been prevented by shading, &c., there would have been nothing so remarkable in keeping the vine in health (not speaking of the crop), as we see exemplified every day when striking cuttings under a bell glass.

This brings me to J. D. P.'s queries respecting cuttings, upon which it is quite unnecessary to enter at length, as I can see nothing in the operation of striking that will support our friend's hypothesis: the very same principle is exemplified that I have adverted to in the case of the transplanted vines, and this will be better understood by attending to the phenomena that take place, when a slip of a gooseberry put unprotected in the ground becomes a plant; or when a slip furnished with leaves does the same, when shaded from the sun, and attended to in other respects as its comparative hardiness or tenderness require, than could be done by any laboured description. The method by which moisture is absorbed by a cutting, it being only a disjoined part of a whole, could not be adduced as a proof of the manner it is done by a perfect plant; but I conceive that the moisture will rise in the same tubes as formerly, though in a far less perfect way. But it is the top more than the bottom of a cutting, the preservation more than the developement of the vital energies, that we must first attend to. If we can only keep the leaves in a healthy state, the elaborating processes, however slowly effected by them, will gradually lead to the production of capillary absorbents; which will supply the slip with the means of extension, and with the power of becoming, like its archetype, great, grand, or beautiful.

It is very probable that the individual who has proposed these queries may be more competent to answer them than he who now addresses you; if so, I hope he will not only excuse my errors and imperfections, but candidly expose them: and, lest I should have succeeded only so far as to render darkness more visible, I earnestly solicit your more learned and more experienced correspondents to throw some light upon the subject; for, trifling though it appear to some, I am fully convinced that a proper understanding of phytological science will lead to great improvements in the art of gardening. — *Scientiæ et Justitiæ Amator. King's Road, Chelsea, June* 28. 1834.

Perpetual Cropping. — In that most excellent work, *Conversations on Vegetable Physiology*, vol. i. p. 267., it is stated that there is land in the Vale of Glastonbury, in Somersetshire, which is celebrated for growing wheat many years successively, without being manured; and that near the Carron Iron works, in Stirlingshire, wheat has been raised from the same land above thirty years, without injury either to the crops or to the soil. Believing, as I do, in the doctrine of the exudations of plants, so beautifully explained in the volume quoted, I feel great difficulty in giving faith to the above statements. As you have, no doubt, correspondents in the neighbourhood of both places, some one of them in each would probably oblige me and, no doubt, others of your readers, by examining into the case, and sending you the result. For instance, Mr. Callow (IX. 123.), and the ingenious Peter Mackenzie (IX. 563.). — *D. W. Stewart. Shrewsbury, March* 10. 1834.

Planting Oaks a Year or two before the Trees intended to nurse them; in answer to the Rev. W. T. Bree. (p. 295.) — In reply to Mr. Bree's enquiry as to the policy of planting oaks, where they are the principal objects, two or three years before the plantation is filled up with the nurses, I have no doubt that this would answer extremely well; but it would be inconvenient, as it would interfere more or less with the cropping of the land in the interval; and, without more care than usually characterises those to whom the tillage of land is intrusted, the oaks would, in all probability, be injured. From Mr. Bree's observations, I am inclined to doubt whether he adopts the plan of cutting off the young oaks close to the ground two or more years after planting. If the oak is strong and well rooted when planted, and the nurses are planted small, that is to say, two years after their removal from the seed bed, and the oak planted at the same time is cut off two years afterwards, provided the soil be well adapted to oak, he will find the principal shoot from the stool (the others being pruned away) will very speedily equal the nurses in growth. It is quite surprising how much faster and straighter the oak grows under this treatment. In 1829, a coachman having put his horses to a carriage in my yard, left them, and they started off; the turn on the road being very short, they got among the opposite shrubs, and, to my annoyance, they broke off a Lucombe oak close to the ground: it was a handsome shrub, but had made very little growth upwards. The next spring I was surprised to see a fine vigorous shoot from the broken stool. I immediately pared away the broken parts, and applied a composition to protect it from the wet. I have just now measured the tree to the top of last year's shoot, being four years' growth: the height is exactly 12 ft. 3 in., and the girth, at a foot from the ground, is just 12½ in. The stem is as straight as a ramrod, with ample branches spreading from the base, after the manner of a fine spruce fir; and, by the end of this season, the stool will be so completely grown over that it would hardly be discovered that the stem was not of one growth from the beginning. I mention this as an accidental illustration of the advantage of the process recommended in this and my former letter. — *Charles Lawrence. Cirencester, July* 11. 1834.

Larch Bark for Tanning. (p. 290.) — Having been absent from home when the June number of your Magazine arrived, I never saw Mr. Bree's enquiries, addressed to myself, until this day, or I should have noticed them earlier. I I have never found any difficulty in disposing of the larch bark in this neighbourhood; but the tanners will only give half the price of oak bark, or thereabouts; whereas I have been informed that the fair proportion, with reference to the tannin contained in a given weight of each, would be two thirds for larch bark. Larch of upwards of twenty years' growth pays for stripping, even at the present low price of 3*l.* a ton. For some years past, I have always received 3*l.* 10*s.* — *Charles Lawrence. Cirencester, July* 11. 1834.

The Tala Plant is said to be used for hedges in the neighbourhood of Buenos Ayres, and to make excellent ones. What is its scientific name? Has it been introduced into Britain; and what is known about it in this country? — *J. S. P. Jan.* 1834.

This appears to be the Coultèr*ia* hórrida of Kunth, a stove shrub, introduced from Carthagena in 1824. It belongs to the natural order of Leguminòsæ, suborder Cæsalpín*eæ*, and tribe Cassièæ. (See *Hort. Brit.*, p. 167.) As to its becoming a hedge plant in Britain, it is quite out of the question. — *Cond.*

The Shaddock and the Mango. — The shaddock contains generally thirty-two seeds, two of which only will reproduce shaddocks; and these two it is impossible to distinguish. The rest will yield, some sweet oranges, others bitter ones, others, again, forbidden fruit, and, in short, all the varieties of the orange: but, until the trees actually are in bearing, no one can guess what the fruit is likely to prove; and even then the seeds which produce shaddocks, although taken from a tree remarkable for the excellence of its fruit, will frequently yield only such as are scarcely eatable. So, also, the varieties of the mango are infinite; the fruit of no two trees resembling each other; and the seeds of the very finest mango (although sown and cultivated with the utmost care) seldom affording anything at all like the parent stock. (*Lewis's Journal*, as quoted in the *Lit. Gaz.*, March 1. 1834, p. 151.) Can any of your readers (Dr. Hamilton of Plymouth, for instance) inform me to what extent the assertions above, respecting the shaddock, are true? If the seeds of a shaddock will not only produce shaddocks, but oranges and lemons, the fact will be as wonderful as the primula of the Rev. Mr. Herbert, which produced, from one seed-pod, auriculas, polyanthuses, cowslips, and primroses. — *James Roberts. York, March* 5. 1834.

Balsams. — The balsams exhibited at the horticultural fête, July 5., and noticed p. 411., being profusely covered with bloom, and yet weak in their stems and branches, we wrote to Mr. Mills to ask the cause, when he sent us the following answer: — The balsams exhibited were grown under frames with melons, and were thus drawn up weak. They were, when too large to remain with the melon plants, removed into a pit that had become vacant, in which there was a little bottom heat, but not sufficient to keep them growing as fast as they had been growing in the melon frame, by which means a great check was given to them. They then became infested with the green fly, which would have destroyed them, had I not given them a strong fumigation with tobacco. These two checks, you perceive, were the cause of the flowers being in disproportion to the strength of the plants. This kind of balsam, when well grown, is, I think, the most beautiful of the balsam tribe. — *George Mills. Gunnersbury Park, July* 13. 1834.

Cabbage Tree of Lapland. — Can any of your readers inform me where I could procure seeds of this plant, which is said to be more hardy than the ruta baga, and to grow to the height of four or five feet? My intention is to use it as winter food for sheep, on land to which I cannot afford a sufficient supply of manure to grow turnips. — *John Brown. Cotswold, Gloucestershire, Dec.* 1833.

Art. V. *Covent Garden Market.*

	From			To		
The Cabbage Tribe.	£	s.	d.	£	s.	d.
Cabbage, per dozen:						
White - - -	0	0	9	0	1	6
Red - - -	0	3	0	0	4	0
Plants or Coleworts -	0	1	6	0	2	6
Broccoli, Cape, per bunch -	0	1	0	0	1	6
Legumes.						
Peas, per sieve - -	0	1	6	0	3	6
Kidneybeans, per half sieve	0	1	0	0	1	6
Tubers and Roots.						
Potatoes - per ton	2	10	0	4	0	0
Potatoes - per cwt.	0	3	0	0	4	0
Potatoes - per bushel	0	1	9	0	2	3
Turnips, White, per bunch	0	0	2	0	0	3
Carrots, per bunch - -	0	0	4	0	0	8
Horn - - - -	0	0	6	0	0	0
Red Beet, per dozen -	0	1	0	0	1	6
Radishes:						
Red, per dozen hands (24 to 30 each) - -	0	0	9	0	1	0
White Turnip, per bunch	0	0	1	0	0	1½
The Spinach Tribe.						
Spinach per sieve -	0	1	6	0	2	0
Spinach per half sieve -	0	1	0	0	0	0
Sorrel, per half sieve - -	0	1	0	0	0	0
The Onion Tribe.						
Onions, per bushel - -	0	3	6	0	0	0
For pickling, per half sieve	0	2	6	0	5	0
When green (Ciboules), per bunch - - -	0	0	3	0	0	0
Leeks, per dozen bunches -	0	2	6	0	3	0
Garlic, per pound - -	0	0	6	0	0	8
Shallots, per pound - -	0	0	6	0	0	10
Asparaginous Plants, Salads, &c.						
Artichokes, per dozen -	0	2	0	0	4	0
Lettuce, per score:						
Cos - - -	0	0	9	0	1	6
Cabbage - - -	0	0	6	0	1	0
Celery, per bundle (12 to 15)	0	1	0	0	1	6
Pot and Sweet Herbs.						
Tarragon, per dozen bunches	0	6	0	0	0	0
Fennel, per dozen bunches	0	3	0	0	0	0
Thyme, per dozen bunches	0	3	0	0	0	0
Sage, per dozen bunches -	0	2	0	0	0	0
Mint, per dozen bunches -	0	2	0	0	2	6
Peppermint, per doz. bunches	0	1	6	0	0	0
Marjoram, per dozen bunches	0	3	0	0	0	0
Savory, per dozen bunches -	0	2	6	0	0	0
Basil, per dozen bunches -	0	2	6	0	0	0
Rosemary, per dozen bunches	0	4	0	0	0	0
Lavender, per dozen bunches	0	3	0	0	0	0
Tansy, per dozen bunches -	0	1	6	0	0	0

	From			To		
Stalks and Fruits for Tarts, Pickling, &c.	£	s.	d.	£	s.	d.
Sea Samphire, p. small punnet	0	0	6	0	1	0
Vegetable Marrow, per dozen	0	0	9	0	1	0
Capsicums, per hundred:						
Green - - -	0	1	0	0	1	6
Red - - -	0	8	0	0	0	0
Chilis - - -	0	1	3	0	2	0
Edible Fungi and Fuci.						
Mushrooms, per pottle -	0	0	9	0	1	6
Morels, dry, per pound -	1	4	0	0	0	0
Truffles, per pound:						
English - - -	0	3	0	0	0	0
Foreign, dry - -	0	12	0	0	0	0
Fruits.						
Apples, Dessert, per ½ sieve:						
Gravestein - -	0	5	0	0	6	0
Kerry Pippin - -	0	5	0	0	6	0
Nonesuch - -	0	3	0	0	0	0
Quarrenden - -	0	3	0	0	4	0
Baking, per bushel -	0	2	0	0	3	0
Pears, Dessert, per half sieve:						
Williams's - - -	0	15	0	0	18	0
Knevett's Seedling -	0	10	0	0	15	0
Peaches, per dozen - -	0	2	0	0	4	0
Nectarines, per dozen -	0	2	6	0	3	6
Plums, Dessert per ½ sieve	0	5	0	0	7	0
Plums, Dessert per punnet	0	1	0	0	1	3
Green Gage per half sieve	0	12	0	1	0	0
Green Gage per punnet	0	1	0	0	1	6
Coe's Golden Drop -	0	2	0	0	0	0
Imperatrice - -	0	2	0	0	2	6
Baking, per half sieve -	0	3	6	0	5	0
Mulberries, p. gall. (2 pottles)	0	0	8	0	0	0
Currants, per half sieve:						
Black - - -	0	3	0	0	5	0
White - - -	0	2	6	0	3	6
Red, for wine - -	0	3	0	0	3	6
For tarts - -	0	3	6	0	4	0
Dessert, per half sieve	0	5	0	0	7	0
Raspberries, Red, per gallon (2 pottles) - - -	0	0	9	0	1	0
Walnuts, Foreign, green, per bushel - - -	0	8	0	0	10	0
Filberts, English, per 100 lbs.	3	0	0	3	15	0
Pine-apples, per pound -	0	3	6	0	7	0
Hot-house Grapes, per pound	0	1	6	0	5	0
Grapes from the open wall, per pound - -	0	0	4	0	0	6
Figs, per dozen - -	0	2	6	0	5	0
Melons, each - - -	0	2	6	0	5	0
Cucumbers, Pickling per hundred -	0	0	6	0	0	9
Cucumbers, Pickling per thousand	0	3	0	0	4	0
Oranges per dozen -	0	1	0	0	3	0
Oranges per hundred -	0	8	0	0	18	0
Lemons per dozen - -	0	1	0	0	2	0
Lemons per hundred -	0	6	0	0	14	0
Brazil Nuts, per bushel -	0	16	0	0	0	0
Spanish Nuts, per peck -	0	4	0	0	0	0
Barcelona Nuts, per peck -	0	5	0	0	0	0

The favourable state of the weather in the early part of this month, for the growth of vegetables, has been the means of keeping up a supply of most of the articles usually furnished at this season; so that prices have been altogether very moderate, with the assurance of continuing so, and the certainty of a good supply throughout the autumn and early winter months. Of fruit we have had but little except apples, which are generally an abundant crop. Plums, damsons, and pears are scarce. We have had a supply of green gages from France, which have realised good prices, and remunerated the importers, although the expense of transport from Brighton to London is very heavy. Some fine red currants from Holland have been occasionally seen in the market, although our own crop has been generally good. Melons, from Holland, have also been plentiful at very low prices. Filberts are deficient in crop, but have been sent to market in a very green state plentifully, so that our supply to come will be short. Walnuts, from Ostend, have been introduced in large quantities in an unripe state; so that the market is, at present, quite overloaded with them: our own crop is comparatively small. Of wall fruit we have had an excellent supply, being forced precociously into the market by the continued prevalence of a very high temperature. Prices have been, consequently, low; but are now gradually improving. Grapes have been in abundance, and the crops upon the walls are extraordinary. Onions for winter use are coming to hand plentifully; the crop generally good. Of potatoes we have had a moderate supply: the crop having been generally improved by the late rains, the later planted varieties will be better in quality and quantity than was anticipated during the early part of the season. Turnips are in good supply, with promise of abundance; the quality much improved by the wet weather in the early part of the month, and the later crop made certain. Of late peas we have had a fair proportion; and a small supply may be expected for a month or six weeks to come. French beans have been, and continue to be, excellent, and in large quantities; the continuance of which, unless interrupted by early frost, may be confidently expected.— *G. C. August* 25. 183.4

ART. VI. *London Horticultural Society and Garden.*

AUGUST 5. 1834. — *Read.* A note upon the Chasselas musqué grape, by Mr. Robert Thompson.

Exhibited. Flowers (double) of a variegated pomegranate, from Lady Farnborough. Melons, five, from Mr. James Duncan, gardener to W. Whitbread, Esq. Grapes, two sorts, from Mr. J. Wilmot, F.H.S. Flowers of the Exmouth magnolia from the open ground, fruit of the Devonshire Quarrenden apple, and of the Maddock apple, from Mr. J. Kirke. Cucumbers, 21 in. long, from Mr. Cuthill, gardener to L. Sulivan, Esq. Brunsvíg*ia* Josephìn*æ*, from Mr. Fielder, gardener to W. Linwood, Esq. Flowers of Stuárt*ia* virgínica, *Catálpa syringæ*fòlia, Nolàna paradóxa, Eschschóltz*ia* califórnica double-flowered, Sparáxis sp., double-flowered pomegranate, China roses, georginas, and a seedling Diánthus, from Mrs. Marryat. Flowers of georginas from Messrs. Chandler, and from Mr. Glenny.

Also, from the Garden of the Society. Fruit: Late duke cherry, from a standard; Early bough apple, an American variety, a very good early apple either for the kitchen or the table. Grapes: Harrison's hardy purple, one of the Burgundy tribe, or, if a seedling, allied to them; it proves not large enough for deserving glass, although it is a good grape for a wall; Large white sweetwater, Green chee. Flowers: Chiròn*ia* trinérvis, Fúchs*ia* sp. from Port Famine: this species is remarkable for the dark colour of its foliage; its flowers are numerous, dark-coloured, and rather small; Lobèl*ia* *Tùpa*, *L*upìnus ornàtus, Erythrìna *C*rísta-gálli, from the open air; Catasètum tridentàtum var., *V*erbèna venòsa and Aublèt*ia*, Pentstèmon Richardsòni, *P*hlóx cordifòlia, Zínn*ia* élegans coccínea, *H*ibíscus africànus, *H*elichrỳsum bracteàtum álbum, *Petùnia* phœnícea, Potentílla Hopwood*iàna*, *C*hrysánthemum carinàtum, *L*upìnus mutábilis and mutábilis var. Cruckshank*iànus*, Wistàr*ia* Consequà*na*, Sóllya (Billardièr*a*) heterophỳlla, Nicot*iàna* glaúca, *C*eanòthus azùreus, *C*aprifòlium japónicum, roses, georginas, Magnòl*ia* grandiflòra var., var. exoniénsis, and var. rubiginòsa.

ART. VII. *Obituary.*

DIED, at St. Mary's Isle, Kirkcudbright, on June 24., *Mr. James Nisbet*, gardener, aged 61 years. Shrewd, rational, and intelligent, he possessed, in no ordinary degree, all the social and all the domestic virtues. He was a skilful gardener and an excellent botanist, and had long enjoyed the honour of being a corresponding member of the Caledonian Horticultural Society. (*Dumfries Courier.*)

THE

GARDENER'S MAGAZINE,

OCTOBER, 1834.

ORIGINAL COMMUNICATIONS.

Art. I. *Notes on Gardens and Country Seats, visited, from July 27. to September 16., during a Tour through Part of Middlesex, Berkshire, Buckinghamshire, Oxfordshire, Wiltshire, Dorsetshire, Hampshire, Sussex, and Kent.* By the Conductor.

(*Continued from* p. 419.)

Tottenham Park Wharf. — *Aug.* 17. This wharf is kept by Mr. Stanley, who also rents a farm, and has a general charge, as substeward, over a considerable tract of country on Lord Aylesbury's estate. Under his care is the principal part of the cottages which have been improved by Mr. Iveson (see p. 413.). We rode to several of them with Mr. Stanley, who gave us numerous interesting details of their past, as compared with their present, state. The people are still slaves to the poor laws' system; but wretched indeed must have been their condition before they were commiserated by Mr. Iveson. In short, they were then ignorant and savage enemies of the farmers, and of every other class of men. Mr. Stanley, with the approbation of the late marchioness, introduced the four girls' schools before mentioned; but twice that number of schools, both for infants and for the youth of both sexes, are wanted. Nothing great, however, can be done, in the way of educating the poor, till a national system of instruction is established. Mr. Stanley is from the Duke of Sutherland's estates at Trentham, and has enlarged and liberal ideas upon the subject of territorial improvement. On his wharf we saw a large heap of Bath ashes; viz., the street sweepings of that city, after they have been laid in a heap, and suffered to ferment, and afterwards sifted or screened, in the manner of the *poudrette* at Paris. They are sold to the farmers at 4½*d.* a bushel. The Newbury ashes, which are made from turf dug out of the Vale of Kennet, sell from 8*d.* to 4*d.* a bushel, according as they are more or less earthy. With the facility of procuring these ashes, and the permission to cut as much fern as they choose from the Park at Tottenham for litter, it is not to be wondered at that the farmers on this estate should raise large crops, notwithstanding their inferior system of culture. A curious practice with meadow lands was pointed out to us by Mr. Stanley. Where the soil of such grass lands is stiff, the farmers strew stubble, or dry litter, such as old thatch, and the sweepings of stack yards, slightly over it; these straws the worms draw into their holes, and in this way are supposed to fertilise the ground, and render it lighter. Mr. Stanley is convinced that this practice has a good effect; but as to how it operates he is not quite so clear. In going to see the old barn, in which Henry VIII. is said to have been married to Jane Seymour (the mother of Edward VI., who established so many schools), we observed the process of building mud walls going on. It is here practised by common day labourers; and Mr. Stanley assured us that, when built on good flint or brick foundations, and well thatched, with the eaves projecting so far as completely to throw off the rain, these walls will last for an unknown length of time. They are very common in Wiltshire, and make excellent farmyard as well as garden walls, and the warmest of all cottages. In our *Encyc. of Architecture*, § 838. to 843., will be found a detailed description of the mode of building cob walls in Devonshire, where houses two or three stories high are built in this way. This account was sent us by a clergyman, who states, as a proof of their great durability, that he was himself born in a cob parsonage, built in the time of Elizabeth. The Devonshire mode, and that practised in Wiltshire, appear to be exactly the same. The Cambridgeshire mode is different, and is also given in the work referred to, § 159. The French mode (*pisé*), which is more elaborate, will be found in our *Architectural Magazine*, vol. i., as applicable to one of the most economical designs for a group of four roadside cottages (by Mr. Wilds, surveyor, Hertford), which we have anywhere seen. We would not, however, be understood as recommending cob, mud, or *pisé* walls, either for cottages, or anything else, where brick or stone can be procured; but we should certainly prefer them to loghouses, as being safer from fire, warmer in winter, and cooler in summer.

Tidworth, Thomas Ashton Smith, Esq. — *Aug.* 18. This gentleman is celebrated in the annals of sporting, and we visited his place chiefly with the view of seeing the plans of his stables and dog-kennels. We were, however, agreeably surprised to find an excellent house, and kitchen-garden, and a very intelligent young gardener, Mr. Saunders, the brother of our Bristol correspondent of that name. (IX. 425.) The steward of the estate here is Mr. Northeast, an enlightened and well-informed man, who has followed the same system of improving the cottages under his care, as Mr. Iveson has in those of the Tottenham Park estate.

The house at Tidworth is situated in a bottom, with little pretensions to architectural style; but it is substantially built, and contains a good suite of apartments, large, lofty, and well lighted, and plainly, but comfortably, finished and furnished. The bedrooms are numerous, and, with the dressing-rooms, are also lofty and properly lighted and ventilated; and they are finished in a style perfectly consistent with that of the principal rooms. The furniture harmonises with the finishing; but, though both are plain, it must not be thought that the effect produced is meagre; for the doors of the public rooms are of mahogany, and the windows of plate glass. We examined the kitchen, fitted up by Ward of London; the contrivance for supplying all the bedrooms with hot water from the back of the kitchen fire, by Stothert of Bath; the bath room; the arrangements for watering the flower-garden and extinguishing fires, by Bramah; and the game, meat, and vegetable larders, fitted up with slate; all of which we found excellent. On the whole, this house is the most complete and comfortable which we have met with since we left London; it is spacious, and yet habitable; and everywhere substantially good, without the slightest appearance of glitter or gaudiness. One peculiarity in it, and in all the other buildings at Tidworth, is the use of Welsh slate, wherever it can be brought in. All the bedroom, and many of the sitting-room chimneypieces and hearths are formed of it; it is used for paving the passages and courtyards; for forming cisterns, troughs, mangers, and orange-tree boxes; for kitchen tables and sideboards; for a large mortar for culinary purposes; for tables and shelves in the dairy and larder; and for a variety of similar uses.

There is a handsome architectural conservatory, designed by Mr. Page of Southampton, joined to the house; but on the lawn, which is too much limited by the boundary fence, there are a number of flower-beds put down at random, without any obvious leading principle. The grounds on one side of the bottom in which the house stands rise steeply, and are planted in the style of a park terminating in massive woods; on the other side they rise, and are laid out as pleasure-ground, so contrived as to conceal the kitchen-garden, stables, and dog-kennels. There is a fine vista from the window of the study up this last steep slope; terminating in a small temple, with an intervening fountain, which constitutes the finest scene in the pleasure-ground. On the top of the hill is a well of great depth, from which the water is raised by means of a steam-engine of four-horse power, to a reservoir, from which the whole place is supplied. One pipe surrounds the house; and has, at different distances, branches to which leathern hose can be attached, by which water can be conveyed to the distance of 150 ft., either for the purpose of extinguishing fire in the house, or watering the beds on the lawn. Mr. Saunders applied it to the latter purpose in our presence; and we must say, that, independently of its use, it is even entertaining as an exhibition.

The kitchen-garden has been neglected; but it is now under a system of renovation by Mr. Saunders; who, judging from his acquirements and ideas, we have no doubt, will make it what it ought to be. There are several pineries, vineries, peach-houses, pits, and other conveniences; and a good gardener's house, though rather low and damp. Mr. Saunders has discovered an excellent loamy soil for pines in the sheep pastures; and also, in one of the fox-covers, a bed of yellow gravel, like that at Kensington, both of immense value in a part of the country where formerly neither had been found. The park is varied by single trees and small groups, transplanted, under the direction of Mr. Page of Southampton, by Mr. Wallace, a former gardener. Some of these trees are of great age and size; and one walnut, which has a trunk 18 in. in diameter, is supposed to be above a century old. They were not prepared in Sir Henry Steuart's manner, but were taken up with as great a length of ramose roots as could be done: they are all doing well. The plantations on the rising grounds were also made by Mr. Page; and their effect promises to be excellent. In one of these plantations, a tower, with a turret, has been built for the purpose of watching the progress of the late system of incendiarism, which has greatly intimidated most of the nobility and gentry of this part of the country. To the same cause (viz., the dread of the spread of incendiarism) is to be assigned the establishment of the steam-engine, the well, the reservoir, and the system of delivery-pipes round the house.

The dog-kennels are on the top of a hill, adjoining the well and steam-engine, and consist of three circular lodging-rooms; with a feeding-house at one end, and the huntsman's house at the other. All the buildings are thatched; and the lodging-rooms have ventilators in the summits of their conical roofs, and a circular bedstead in the centre of each room, and occupying the greater portion of it, for the dogs. These bedsteads, when we saw them, were covered with rye straw; the beds fold up in the centre like a lady's reticule, to admit of their being cleaned beneath. The cribs for retaining the straw are covered with tin, to prevent the dogs from gnawing them; and the whole bedstead is painted of a stone colour. The floors of these lodging-rooms are paved with brick, as are the square courtyards in the centre of which they stand. These yards are washed with water from a cock in one corner of each, even as often (as the huntsman, Mr. Burton, informed us) as twenty times in one day. Near the cock there is a slate cistern, from which the dogs drink. In one house were old hounds; and, in the other two, young ones, the males and females of the latter being kept separate. The feeding-house is separated from the lodging-houses by a house for showing hounds; and it has a trough, in which the food (a mixture of coarse porridge and minced horseflesh made into soup) is given to the hounds. The feeding-house, which is under the same roof as the show-house, has a small yard. The boiling-house is at a short distance, and contains a cistern of water, a large boiler, and places for mincing the horseflesh and making the porridge. On the whole, we could not help noticing the coincidence, in many points, between this plan for a dog-kennel and that given in our *Encyc. of Cottage, Farm, and Villa Architecture*, § 1945. The situations of both are on an eminence; in both the boundary fence is an open railing, through which the dogs, agreeably to Somerville's directions, can look over an extensive prospect; in both are contrivances for frequently washing the courtyards with water; and in both is a show-house. Our design (*fig.* 78.) we certainly consider handsomer than that at Tidworth, though not of more than equal merit in respect to plan.

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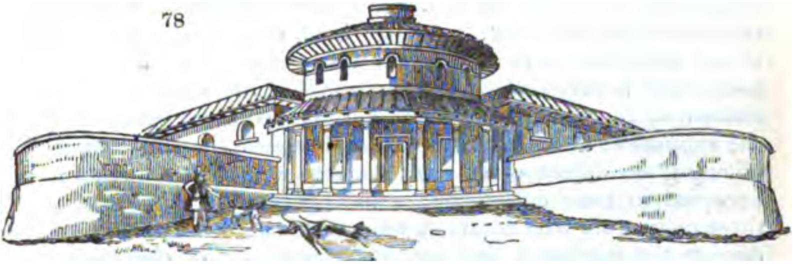

The stables form a quadrangle; the exterior of which is in sublimely bad taste, it being in horizontal panels, in imitation of a chest of drawers on a large scale. The interior is spacious and well ventilated, but it contains nothing particular in regard to plan.

On the whole, we were much pleased with this place; though, like Tottenham Park, it is deficient in several points of high keeping: for example, there were deep edgings to the walks, and dug beds, and much too narrow turf verges to the walks, in the shrubbery.

(*To be continued.*)

Art. II. *Notices of the State of Gardening in Part of France, as observed in a recent Excursion in that Country.* By Mr. George Charlwood, Seedsman, Covent Garden.

If the following observations, arising out of a recent excursion to France, are available to the general purposes of your Magazine, they are very much at your service. I have merely to premise, that I did not proceed to France for the purpose of comparing the state of horticulture in that country with its state in our own; but on my general business, which is materially connected with the intercourse and interchange of our respective productions in that department.

Landing at *Calais*, late at night, I was not much prepossessed in favour of the French customs by the immediate appearance, on board the vessel, of an armed police, and the customary examination of passports, &c., by the authorities, surrounded by military. As no difficulty occurred, we were soon conducted to a hotel (Quilliac's), where, to our great satisfaction, we found every thing necessary to our comfort and convenience. Early in the morning, I proceeded to take a view of the immediate neighbourhood, but could not observe anything worthy of notice. The town being fortified, it required some time to escape from the embarrassment of drawbridges, moats, &c.; and, after all, little but a general level presented itself; the country in the immediate neighbourhood of Calais being a continued series of marshy land for some miles round. As the town itself is very limited in its population and extent, the production of the vegetables, fruit, &c., immediately necessary to the support of the inhabitants does not require the appropriation of any great extent of surface; consequently, but little land is occupied in their cultivation; and, as it is quite customary for those cultivators who reside at some distance to bring their produce to the market, I had not an opportunity of observing in what degree, and with what kinds of articles, it is supplied.

Proceeding from Calais, in the evening, towards Amiens, I could not make any farther remarks. My progress by the ordinary diligence was not very expeditious; certainly not more than five miles an hour. The country through which I passed, for about ten miles after leaving Calais, is altogether open and arable; not a hedge or a single apparent division of the fields is to be observed for miles, except some few trees on the roadside, with small detached portions of woodland in the distance. The whole appears to be divided into many small farms; the compartments or divisions of the general surface being apparently the only guide to the different occupiers, who are all more or less engaged immediately in the active operations and manual labours required for the cultivation of their respective properties. The farm implements, such as ploughs, harrows, &c., are extremely simple; and, to me, they appeared rude, when compared with the better made articles of the same kind in use in the more improved districts of England. Nearly the whole surface of the land is under plough or spade culture; and there is little waste or unemployed ground, the fields being continued to the very edges of the road.

The system of culture is, apparently, determined by the quantity of land occupied by the respective individuals; but, generally speaking, the breadths are limited, when compared with the extent of the same articles observable on the open downs of Sussex and Cambridgeshire. The crops appeared to be later, in relation to the season (early in May), than with us: of wheat and rye, the winter varieties were only apparent; and it was the season for sowing oats and barley. Beans and peas, which, with us, are extensively and profitably cultivated, are, in this part of France, grown only in detached portions and limited quantities. A few patches of turnip, or colza (*Brássica* campéstris oleífera *Dec.*: see *Encyc. of Agr.*, 2d edit., § 60. 76.), a species of rape, here in extensive use, are the only crops observable at this season. Women are generally employed in weeding and other farm occupations, which they do not seem to consider as at all imposing extraordinary labour. The whole system bespeaks, apparently, an indifference and an easy independence: that which cannot be done to-day, may be finished to-morrow; the cultivators depending, I presume, on the more general certainty of their climate, and being, probably, also much influenced by the buoyancy and elasticity of their general temperament, which indicates the absence of those careful and all-absorbing considerations which pervade more or less all classes, more especially the agricultural one, in England.

After leaving the marshes immediately around Calais, the soil shows itself to be a strong, heavy, retentive clay, requiring much labour and time to reduce it to a state of culture. At the distance of twenty miles, it becomes more loamy, with an occasional appearance of the intermixture of chalk, resembling the soil of some parts of Kent and Sussex. This gives evidence of its superior fitness for the purposes of agriculture; and the state of the crops, which are here more luxuriant, and decidedly superior, confirm this supposition. Through a distance of thirty miles, I did not observe the residence of one respectable farmer or cultivator, such as are to be seen in the rural districts of England; nevertheless the farmers are generally proprietors, and in independent circumstances. From my own observation, I should not consider that the condition of the French cultivators could be at all enviable; but I am assured by some most respectable residents, that they are all more or less in comfortable circumstances; their condition, in this respect, arising from the absence of direct taxation, and the non-existence of tithes or any system of poor laws. As you proceed towards Paris, the soil evidently keeps improving; but there was not any appearance of what máy be considered horticultural crops, except some preparations for planting potatoes, although spade culture appeared to be very generally adopted.

The ancient town of *Amiens* is the centre of an extensive agricultural district. The botanic garden here is small, and apparently not very well supported. Its situation is by no means a fit one, as it is immediately surrounded by the manufactories of the neighbourhood; and the soil is apparently indifferent and exhausted. The plants are arranged, according to the Linnæan system, in compartments; and a careful attention is paid to their divisions into their respective classes, which are carefully indicated by their names, and not, as is generally done with us, by numbers, which it requires a reference to the catalogue of the collection to explain.

As I happened to be at Amiens on the market day (Saturday), I took the opportunity of devoting the morning to the inspection of the markets for vegetables and flowers. I was certainly much disappointed at the display, which was anything but abundant. The advantages of the climate are not, apparently, taken advantage of by the cultivators, or they might certainly boast (in May) of many articles which I did not observe. All I could find were a few cabbage lettuces, some long white or Naples radishes, and a small quantity of asparagus; which naturally surprised me, as I had only a few days before left the environs of Covent Garden Market, in which all these articles, with many others not to be found here, were to be had in the greatest abundance. I enquired if there was any particular reason for this deficiency, and could not learn that either the season was later or the supplies less than usual. The weather had been, as with us at the same period, warm and genial, and the winter had also been mild and free from frost. I could not spare the time necessary for an investigation of the causes of the apparent deficiency of supply, by examining the gardens and systems of culture of the gardeners, most of whom live at a short distance from Amiens.

As there are, however, some florists' gardens within the limits of the city, I visited them. The spaces of ground which they occupy are generally small; seldom exceeding a French arpent, a quantity nearly equal to the English acre. As a general taste for flowers prevails in Amiens and its neighbourhood, the florist-gardeners meet with encouragement, and, consequently, are successful in their business, and evince a considerable degree of taste in it. Showy and fragrant plants are most in demand, and the cultivators necessarily confine themselves to these, filling up their space by forcing (though very slightly) melons for the market. The plants usually cultivated are free-blooming pelargoniums, oleanders, dwarf standard roses, Cácteæ (especially the Cèreus *p*hyllanthöìdes and speciosíssimus), and others. These are more particularly considered as *plantes d'agrémens*, rather than such as are interesting for the botanical associations connected with them. Those of the latter class are not, the cultivators say, at all to the taste of the people of a manufacturing town like Amiens. The artificial aids to cultivation possessed by the florist-gardeners are but few: two or three small greenhouses, a forcing-stove, some few pits for the preservation of plants during the winter, with a few hand-glasses, are all that they possess.

(*To be continued.*)

Art. III. *On the improper Choice that is frequently made of Trees and Shrubs for furnishing small Portions of Pleasure-Grounds.* By Mr. T. Rutger.

The results of your frequent calls at the nurseries and the suburban gardens of the metropolis, which are occasionally given in your Magazine, must, I conceive, prove highly acceptable to the generality of your readers: at least, I find them to be at all times interesting; and as such I read them with much pleasure. They not only bring to remembrance former associations, on which the mind delights to dwell, but they also furnish me with the present state of many places which, during my youthful days, I was in the habit of visiting; and thus, while in retrospect I can sometimes but faintly trace their localities, they are again brought vividly to the "mind's eye." At the same time, they revive and bring to recollection past scenes, which otherwise might have remained dormant for ever. I have frequently thought how delighted I should be to take a trip with you round the metropolis, and to visit gardens in this way; so that, while you might be marking with the eye of a critic the gradations of taste displayed, I might catch a few hints as they occasionally would be elicited. I know that I have no reason to indulge in thoughts of this kind; but, were such an unexpected circumstance to take place, I think I should be inclined to draw your attention to the improper choice that is frequently made of shrubs and trees for furnishing those small portions of pleasure-grounds which are so frequently to be seen round the metropolis. Upon a general principle, I think my ideas are correct upon the subject, and they are as follows: namely, that proportion should always be kept in view; or, in other words, that, in proportion to the size or quantity of ground to be laid out, so in proportion should the shrubs and trees be in point of size also; taking into consideration, at the time of planting, the figure they will present when arrived at a state of maturity. Perhaps there is scarcely a tree to be found which is more desirable to assist in embellishing a lawn of considerable extent than the cedar of Lebanon; but, placed, as it may frequently be seen, upon a grass plot of a few poles square, and sometimes even in the frontage of small villas, every thing like proportion is destroyed; while scarcely any room is left for ornamental shrubs; the variety of which, at the present day, is so great, and many of which are so very beautiful and appropriate for ornamenting villas of the class under consideration.

If we descend lower in the scale of architectural erections, viz., to such as scarcely deserve the name of villas, continual mistakes present themselves in the choice made of trees and shrubs for embellishment: for instance, we may frequently see Scotch pines, or spruce firs, planted for screens to hide walls; than which nothing can be less appropriate: a few laurels, or other evergreens of similar habits, would answer the purpose far better, and be more ornamental; besides, as the cases are but few, in the immediate vicinity of the metropolis, where the pine and fir tribe will thrive, they should be the last kind of trees resorted to for such purposes; and, even were they to thrive well, they would soon grow so large as to be out of all proportion to the situations in which they are placed.

Perhaps it is but seldom that professional persons are engaged in the laying out and planting of such gardens as those now under consideration, therefore animadversions upon the subject are not likely to be of much avail; but, if it were otherwise, many faults of the above description might be pointed out, as the result of bad taste or incorrect judgment; and such observations might lead to a better mode of distributing trees and shrubs in accordance with good taste, as well as to an arrangement more likely to answer the purposes intended.

In adverting to the country villa (the embellishing of which, when properly done, forms its principal feature of attraction), it may not be amiss to observe, that, in the operation of planting, it is very easy to slide into mistakes, by the introduction of such trees as may be favourites, but which may, at the same time, be completely at variance with everything like a fitness or adaptation for the situations given to them. Reflection, in cases of this kind, is therefore necessary; and the consideration should not be, what the tree is at the time of planting, or what it may be for seven years to come, but what it will be when arrived at maturity, as already hinted. Where high screening is necessary for the sake of privacy, which is frequently the case in the vicinity of London (as there, in many instances, a gentleman may be overlooked from the windows of a neighbouring villa), perhaps the pine and fir tribe may be advantageous; as, being evergreens, the privacy produced by them will be permanent: but, where there is only room for a single row, neither the silver nor spruce fir is well adapted to produce the desired effect; as, being pyramidal in their growth, there will always be vacancies towards the top. The ramifications of the Scotch pine being of a different character, as well as more picturesque, that tree will be found to be better adapted for such purposes.

But where it is necessary for screening to be brought into immediate effect to the height of from 20 ft. to 40 feet, it will be difficult to get evergreens of any description to answer the purpose, however desirable it may be for them to do so. It will, therefore, be necessary, in such cases, to make use of the deciduous kinds; and, by making a proper choice, with careful planting, they will be found to answer the purpose well during the summer season; which, after all, is the time when their assistance is most wanted. A striking instance of this may now be seen at Theobalds, near Cheshunt, at the residence of William Wingfield, Esq. This gentleman has spared no pains to effect a seclusion, by planting trees of the required height; and he has succeeded admirably.

Shortgrove, 1834.

ART. IV. *Hints on Shrubbery and Ornamental Planting.*

By CHARLES LAWRENCE, Esq.

As the season is fast approaching for making preparation for planting, I will perform my promise of sending you a few hints on shrubbery or ornamental planting, which experience and observation have suggested to me. We planters find out our errors too late, in most instances, to derive much personal advantage from the discovery; and it is to be regretted that those who watch the progress and effect of plantations should be deterred from recording their experience, by any indisposition to expose their own blunders, or by the notion that they would only be pointing out those errors which others had discovered. Though experienced *artists* may be disposed to smile at your simplicity, first in making mistakes, and then in recording them, the more just view of the matter seems to be, that a host of young aspirants may, by a timely warning, be saved from the commission of similar faults; and that the "gardenesque" (a useful word, by the way, of which I rather think you are the inventor) would be, by such means, continually approximating to perfection.

As many of the general observations in my last letter to you on planting (see p. 26.) are applicable to the subject now under consideration, I shall not repeat them here; but shall proceed to point out, in the first place, the more obvious defects in ornamental plantations, and then suggest such considerations for their original formation as, I am satisfied, will contribute greatly to their pleasing effect at maturity. I must remind the young planter that "there are no gains without pains;" and that, in all operations, more especially in planting, due deliberation, a little patient industry, and the exercise of judgment, will eventually insure the saving both of money and of time, and will prevent great, and often irreparable, disappointments.

The prevailing errors, in boundary and internal ornamental plantations, appear to me to be:—1st, An injudicious selection of trees with reference to the various ends the planter may be supposed to have had in view. 2dly, The positions of the various trees and shrubs, without reference to their relative character of growth, whether producing flowers or not, or whether evergreen or deciduous, and to various other important particulars: for how often do we see plantations, the state of which it seems impossible to account for on any other supposition, than that the planter must have ordered the trees by the waggon-load, and left the arrangement of them to a parcel of mere labourers! 3dly, The distance of the trees from each other; for trees are usually planted so closely, that they soon run together in a mass; and, when the necessity of thinning at length becomes too obvious to escape notice, and the process is commenced, it is found that the removal of every shrub leaves a dismal gap; the foliage of the under branches of all its neighbours having been entirely destroyed by the want of sun and air. This deformity is, of course, not to be endured: the thinning is stopped; and, after a few more years, the only remedy is found to be an almost entire renewal of the plantation; at a period when, under proper management, it could have been in the greatest perfection. Then the proprietor learns the lesson which I wish to impress on the young planter; namely, that, for want of a little thought, and a few hours' attention at starting, he may eventually lose years in attaining his end; if, indeed, he ever attain it at all.

I will now offer you a few suggestions as to the means of avoiding the evils I have detailed; and, in order to make myself intelligible, I will assume an object; and no one ought to plant a single tree in a pleasure-ground without one. I will assume the object to be, shelter from the north and east winds, or to hide buildings, and the like. First, consider whether an external fence be required; and, if so, whether it will be visible from any approach, or other part of the pleasure-grounds. In this case the fence should be of holly or furze; the latter I have heretofore recommended as very ornamental. (VIII. 678.) Farther experience of furze fences induces me to recommend planting two rows at 6 ft. distance. Furze is apt to become hollow at the bottom; and, as it shoots very freely when cut off close to the ground, if two rows be planted, one may be cut off every five or six years, leaving the other as a fence. I have also tried laying furze in the same manner as quicksets, and find it answer perfectly, if carefully done. If your depth of ground should not exceed twenty yards, the first set of trees from the fence should consist of the pine and fir tribe; and not, as we commonly see, of the fastest-growing deciduous trees, which answer neither of the purposes required during six months of the year, when it is of the most importance that they should do so. I would never plant two of the same species, unless the line were very extensive; but would let the plantation assume, as much as possible, a scientific as well as an ornamental character. I can conceive no background more beautiful and interesting than one formed by a collection of the numerous and splendid species of pines and firs; displaying, as they do, such an infinite variety of tints, foliage, and cones. These should be planted 8 ft. or even 10 ft. from the fence, and 20 ft. apart. If the depth of ground be thirty yards, I would recommend a selection of the most ornamental forest trees to be planted at least 30 ft. behind the firs, and at 20 ft. apart; every other one of which must eventually be removed. At 20 ft. in advance of the firs, plant deciduous flowering trees or shrubs, each forming the apex of a triangle, having two of the pines or firs for its base. Here, again, if the line be extensive, the shrubs should be arranged in classes; placing together the numerous and ornamental species of the genera *Cratæ`gus*, *Méspilus*, *Pȳrus*, *Cȳtisus*, *Syrínga*, &c. &c. For this purpose, those varieties which do not ordinarily attain a height of at least 12 ft. would be inadmissible. In advance of these, plant evergreen flowering shrubs at 10 ft. apart. The class of shrubs suitable for this situation is comparatively limited; and amongst those selected will occur individuals varying considerably in the space they occupy at maturity. The Portugal and common laurel, for example, attain a much larger size than most other common shrubs. All the smaller growths in this class, therefore, should be planted directly opposite the deciduous shrubs, and 10 ft. in advance of them; and those of larger growth should be placed in the intervals angled with the shrubs behind, and 5 ft. in arrear of the line of the smaller growths of the same class. Should the plantation form the margin of a lawn, or of that portion of the approach to the house which is within the dressed pleasure-ground, a space of from 15 ft. to 20 ft. may be left in front of the shrubs for flowers. These should also be disposed with reference to the height they attain, keeping the highest growers nearest to the plantation. Classification should also be attended to in this case, if the gardener or his master have sufficient knowledge of flowers; if they have not, your *Hortus Britannicus* will supply all the necessary particulars. I am glad to see the principle so essential to the producing of a striking effect in garden scenery; viz., of planting the different flowers in masses, instead of frittering away the effect by spotting individuals over the entire garden, becoming more generally appreciated in every successive season.

If the plot of ground to be planted be a circle, precisely the same course may be adopted in circles, instead of lines; but some judgment must be exercised, in this case, in placing the plants with reference to aspect, as some thrive best towards the sun, and others in the shade. In any intermediate form, the same principles may be observed. Experienced planters will see that this will be the mere skeleton of a plantation for some years to come; but my principle is, that the proper position of every tree, with reference to the space it will occupy at maturity, should be first determined; the intervals may then be filled up, according to the means and taste of the planter, to produce immediate effect; bearing in mind, however, that every tree or shrub employed for this purpose is destined to ultimate removal or destruction, and must on no account be permitted to come in contact with those permanently located, which will demand annual attention. The intervals may be filled up between the fence and the forest trees, if any be planted, between these and the pines and firs, and between the latter and the flowering shrubs, with larch, ash, birch, &c.: which, when cut out, will be useful for fencing. These may be planted not less than 8 ft. or 10 ft. apart, to come out at from twelve to twenty years' growth, according as the progress of the permanent trees may require; and the spaces between the latter may, if thought too great, be again filled up with birch, hazel, and other woods useful for garden purposes and firing, as soon as the larch, &c., require room. The spaces between the deciduous flowering shrubs, between these and the evergreen flowering shrubs, and between the latter and the flowers, should be filled up with plants of the same description; to be transplanted or cut up when their neighbours, destined to remain, require it. If expense be not an object, ornament may be considered, rather than utility, in filling up the intervals throughout; if the planter has nerve enough to sacrifice a fine shrub, in due season, as readily as an ash or a larch.

There is a certain description of persons who lay claim to much taste in these matters; and who, in discussing the mode of laying out lawns, or in criticising those which exist, are eternally canting about nature, and producing natural effects. These persons will at once proscribe my views as being in shocking bad taste, horridly formal and artificial; but they will not, or cannot, see the obvious distinctions between a waste, a forest, a park, and a lawn. I am confining myself exclusively to the latter, with reference to which it is sheer nonsense to talk about imitating nature. No one practically suffers nature to set her foot on a lawn, if I may be allowed the expression. The grand source of anxiety and expense is the preventing her from establishing any of her spontaneous productions, from the smallest weed to the unpruned luxuriance of the tree. Every part of a lawn is formal and artificial, more or less. Nature produces no gravel walks; no turf "shaven with the scythe and levelled by the roller;" no well-raked beds; no high keeping, as it is called; and she never produced one tithe of the trees and shrubs which are found in every pleasure-ground, in one locality, nor even in one quarter of the globe. The essential characters of a lawn are, in fact, artifice and order. Those who are acquainted with the various growths and characters of the classes of trees and shrubs I have recommended, will see at once that such a shrubbery, at maturity, would be full of variety and interest, though certainly very unlike the unaided efforts of nature.

The main points to be attended to, in all ornamental planting, are:—first, to determine the position of every tree, with reference to its character, that is calculated to produce the effect you require at maturity; secondly, that ample space is allowed to each to arrive at perfection without touching, and thereby injuring its neighbour; thirdly, to fill up the spaces with trees, which are to be removed at various periods of their growth, and in time to allow the full influence of sun and air all around those which are to remain. Every plant will then assume its natural character of growth, and will be covered on all sides with foliage. Instead of having, as in ordinary cases, one unbroken line formed of a mass of confused foliage, produced by every plant exerting itself to push forth its puny branches into free air and light, all being dark and dismal within, you will, on the plan suggested, have no line at all; but a series of distinct individuals assuming every variety of character, all of which will be seen in perfection, in passing, presenting themselves immediately behind the intervals between those in the rank before them.

When plantations are laid out without any system, even if they are properly thinned from time to time, the planter will find it necessary to remove many trees, which he would desire to retain in preference to others of less beauty and interest, on account of their relative position, which is very embarrassing. I thought of adding lists of trees which I should recommend as the subjects of the arrangement I have proposed, as this would greatly facilitate the operations of those who are not familiar with the names and characters of those to be found in the superior nurseries; but, as I could only do this to a limited extent, I hope some of your correspondents in the trade will furnish lists, in each class of plants I have named, in a future Magazine, by way of supplement to this communication.

Cirencester, August, 1834.

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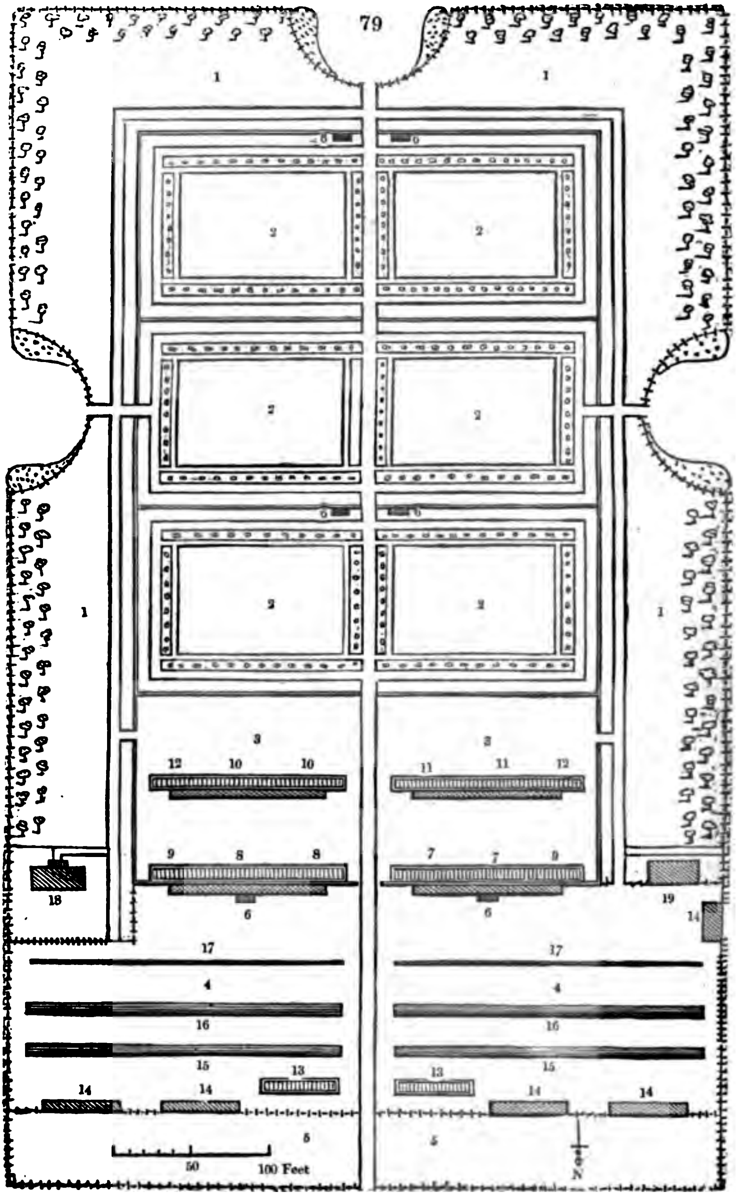


1, Slips. 2, Culinary departments. 3, Forcing department. 4, Frame ground. 5, For compost, mixing dung, &c. 6, Water tanks. 7, Pine-stoves. 8, Vineries. 9, Small stoves. 10, Peach-houses. 11, Cherry-houses. 12, Fig-houses, or for other purposes. 13, Pine or melon pits. 14, Mushroom-sheds, tool-house, &c. 15, Melon and cucumber ranges. 16, Cucumber ridge; early carrots, &c. under hoops. 17, Dwarf walls for training fruit trees, or for tomatoes. 18, Gardener's house. 19, Fruit and onion rooms, with under-gardener's lodging-room, and seed-room over.

Art. V. *A Series of Designs for laying out Kitchen-Gardens.* By Mr. T. Rutger. Design 5., *Containing nearly Three Acres within the Walls, and an Acre and a Quarter in the Slips.*

For cases where a south entrance is not attainable, the foregoing plan (*fig.* 79.) gives the entrances at the east and west sides; either of which, or both, may be adopted. The garden has two cross walls, with a walk wide enough for a carriage drive through the middle, with room allowed, at the southern extremity, for the carriage to turn. This garden comprises something more than two acres and three quarters within the walls, including the forcing department; and the slips give about an acre and a quarter more. In the frame ground, dwarf walls are introduced, for the purpose of training young fruit trees for occasional removal to the inner walls when wanted. These walls will be found useful to gardeners who like to commence with the training of their own trees, or they may be used for tomatoes, &c.

Shortgrove, Essex, 1834.

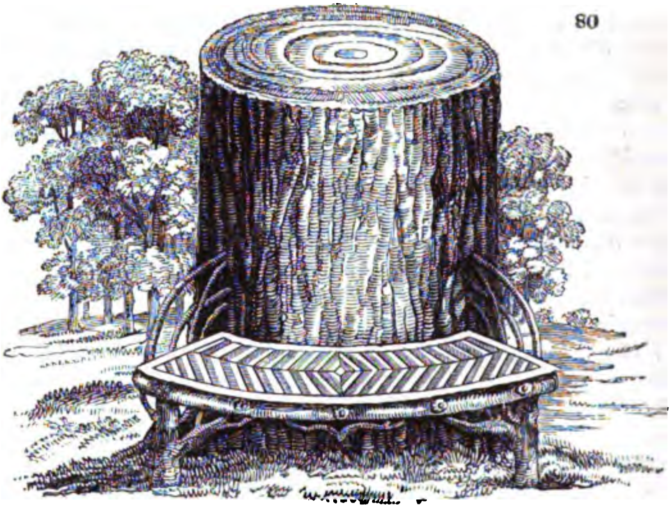
Art. VI. *On Wooden Rustic-work as Garden Ornaments.*

By Selim.

Though I agree in the opinion you express in the *Encyclopædia of Architecture* (p. 986.), respecting wooden rustic-work as a garden ornament, I think there are situations in which it has a good effect; and those who can afford nothing more expensive, may frequently give interest to a small garden by a few embellishments of this description. But, of course, I suppose them to be executed in good taste, and to be suited only to the simple gardens of cottages and small villas. They have certainly a very bad effect when introduced near a mansion which has any pretensions to magnificence; and I remember an instance of this kind at Blenheim. When I saw that princely residence, some years ago, a thatched rustic temple stood in a flower-garden, which had been recently formed, close to the house. The temple was a conspicuous object from the windows of some of the principal apartments; and, as it could not harmonise with any of the grand objects around it, it looked ridiculous, and produced a very disagreeable effect. In the grounds of a palace like Blenheim, rustic-work can only be in good taste when placed in a distant part of the park: but, around a cottage or villa, it forms a good substitute for the more costly ornaments, such as statues, urns, and terraces, which are the proper embellishments of an architectural mansion. One advantage of wooden rustic-work is, that it can be adapted to a great variety of purposes. Thus, very beautiful and even architectural temples may be formed of unbarked wood. Ornamental doors, every description of garden seats and flower-baskets, and vases of very elegant forms, may be composed of the same material. Shady walks, also, having the pleasing gloom and enriched effect of a Gothic cloister, may be made of wooden rustic-work; indeed, there is scarcely any kind of garden ornament to which it may not be adapted. I allude more particularly to what I call wood mosaic, which is, I believe, rather a modern invention. It is formed of split sticks, of various lengths and sizes, and having bark of different colours. The pieces are nailed to any flat surface of wood, and very beautiful and elaborate patterns may be produced by arranging the pieces according to their sizes and the various colours of the bark. Elegant garden seats, and vases of almost any shape, may be covered with this kind of mosaic work: but, as it is not durable when constantly exposed to the weather, it is most suitable for the inside of summer-houses and garden temples. In such situations, the richest specimens might be introduced; and, if varnished over, they would last for a number of years. There are some handsome and rather costly specimens of this kind of ornament in the flower-garden at Bagshot Park, made, I believe, under the direction of the intelligent gardener there.

I greatly admired the garden entrance at Bagshot, which is a sort of Gothic cloister of trelliswork overhung with shrubs; but I did not observe any specimens of very elaborate workmanship, except some flower-baskets, and the inside of a summer-house, in which were borders of round pieces of wood cut across the grain and varnished. The effect was very ornamental, and the pieces of wood had almost the appearance of large agates. The admirers of moss houses may see a beautiful specimen of this kind of work in one of the summer-houses at Bagshot. The various shades of moss are arranged in stripes and panels against the walls, in a manner much superior to anything of the kind that I had before seen. There is here none of that ragged looseness usually seen in moss-work; and it has the rich effect of uncut velvet, or rug-work, with a close even surface, on which birds can make no impression. It appeared to me to have been pressed into small masses, and built up like bricks. Probably some sort of cement is mixed with the moss. It forms a beautiful lining for a garden temple; and, if Mr. Toward, the gardener, is the inventor of this kind of moss-work, it does great credit to his taste and ingenuity. [Mr. Toward has kindly sent us a view, with working drawings and descriptions, of this moss-house, which we shall give in our next.]

But I am wandering from my purpose in troubling you with this paper, which is to show how an embellished effect may be given to a small garden by the use of ornaments of wooden rustic-work; and, as I shall express my meaning most plainly by an example, I will briefly state the effect of a few ornaments of this kind which I have placed in my own garden. The garden consists of only twelve beds, of a moderate size, on nearly a level surface of turf. The design of the beds is regular; and there are broad spaces of turf between them. On two sides of the garden are some large trees and thick shrubberies; the house is on another side; and, where the fourth side joins, a small piece of half-kept ground, a fine old walnut tree, a large holly, some box trees, junipers, laurels, and other shrubs, are grouped upon the turf, forming a sort of half screen, through which you see (over the rough ground) the trees and shrubs which bound the premises. The whole is on a very small scale; but as the ends of the walks are concealed, and a little intricacy is created by the groups of shrubs, it appears from the house to be more extensive than it is. When the garden was completed, a something seemed wanting to give it a picturesque effect. I thought it not half so pretty as it was in the wilderness state in which I found it when I came to the house, after it had been neglected for ten or twelve years, during which time the trees had actually smothered the place, the garden flowers had grown wild, and every thing was in a condition of "most admired disorder." Now the trees were thinned out, and the whole reduced to exact order, the result was an effect of neatness and prettiness, which looked bald and uninteresting after the picturesque charm of its former wildness. In short, it wanted the addition of some kind of ornament to give it a picturesque effect. When I was considering how to produce this effect, a manufactory of earthen garden vases in the neighbourhood suggested the ambitious idea of urns and pedestals; but they were too expensive and much too grand for a cottage garden. As large flints could be easily procured, I thought of doing something with them; but I could find no proper place for anything in the way of rockwork, which, however well executed, generally looks ridiculous on a tame even surface. There was nothing to be done, therefore, but in the wooden rustic way; and I began the work of embellishment by attaching a small rustic seat (*fig.* 80.) to the trunk of the old walnut tree, which stands on a hillock at one corner of the ground, whence you look upon the flower-beds. When the seat was finishing, and I sat down to observe the general effect of the little scene before it, I found, to my horror, that, besides seeing what I wished to see, the flowers, and the shrubs around them, an unlucky bend in a walk opposite let in a full view of an ill-looking office, which I thought I had effectually concealed; in short, that the termination of the miniature landscape was the ash-pit. What was to be done now? I could not find in my heart to take down the seat, which, with very little assist-



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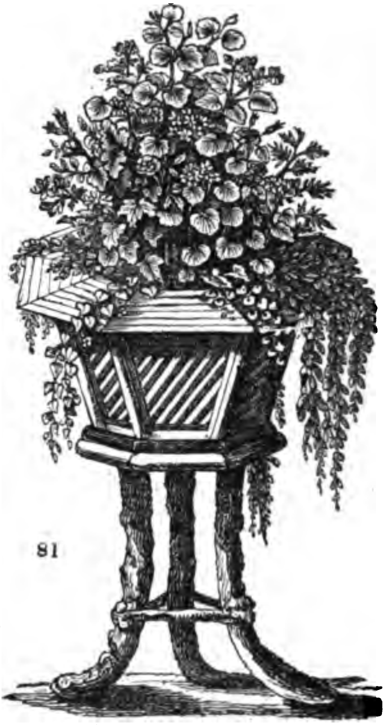
ance, was the work of my own hands; and I was, of course, proud of it as a specimen of my industry, if not of my taste. I could have altered the turn of the walk, and have planted out the nuisance; but I wanted an immediate remedy, and the walk was most convenient in its present state. I therefore put up a rustic screen and doorway across the walk, which has contributed greatly towards the effect I wished to produce; and which, seen from the seat before mentioned, partly overrun with ivy, and partly concealed by shrubs, may be supposed the entrance to a summer-house or hermitage. Having succeeded thus far, a small worn-out barrel, which was useless for any other purpose, suggested the idea that half of it, covered with wood mosaic work, would make a pretty flower-basket; and, as it stands on a tripod, backed by a large shrub, and filled with pelargoniums, Lophospérmum erubéscens, Maurándy*a* Barclay*àna*, and moneywort (*L*ysimàchia Nummulària), hanging in graceful festoons over the sides, it has certainly an ornamental effect. (*fig.* 81.) To these little embellishments I added a common movable seat, and a basketwork of unpeeled hazel rods round the centre flower-beds; and thus, with no other materials than such as were procured from the wood-stack, and from my neighbour the woodcutter (a man very learned in the twisting and splitting of wood), I have contrived to give my garden as much ornament as its size will allow, and to substitute for its former tameness a picturesque and decorated appearance. My aim has been to effect this without having too much ornament, and to have nothing that forces itself on the attention. A striking object in a garden should be something handsome and costly. Rustic-work, at best, is but frail and temporary, and should not be obtrusive. I do not, however, object much to its frailness, because, as it costs little, the renewal is a cheap source of amusement, and a fresh exercise of the invention.

I am sensible that this paper will be considered trifling by many of your readers; but it may be useful to some who are situated as I am; to those who are fond of gardening in a small way, who would like to have a pretty garden, and who are not overburthened with that necessary evil, money. If you think that such persons may take a hint or two from my rambling details, perhaps you will give them a place in the Magazine.



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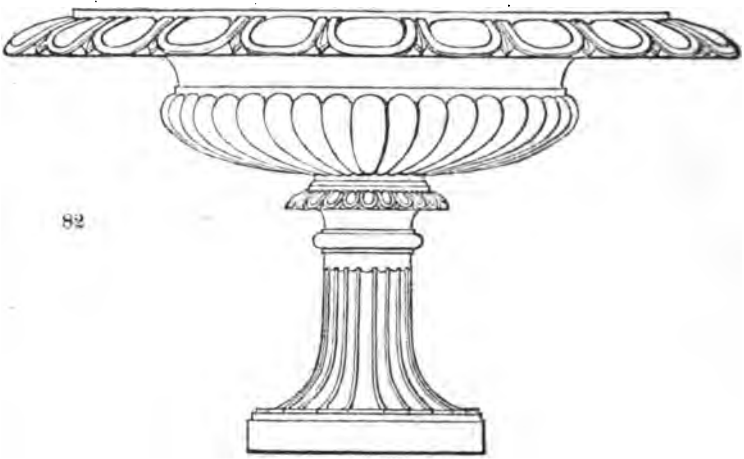
The doorway of which I have spoken was made by a carpenter, and it certainly is the most perfect and satisfactory of my rustic ornaments. The seat and the flower-basket were made by myself and a common labourer who works here. All the wood has the bark on. The basket (*fig.* 81.) is black birch and hazel; the top, which projects considerably, is of maple; thin slabs of that wood having been sawed off a rough log. It is most tedious work, and requires a great deal of patience and ingenuity. I let the creepers in the basket grow as they like; and they last year took very elegant forms. The moneywort reached the ground, and would have taken root there, had I permitted it.

January 23. 1834.

Art. VII. *On the Employment of Vases as Receptacles for Plants in Town Gardens; with some Remarks on their Use in Garden Scenery in the Country.* By the Conductor.

Passing one day lately Mr. Austin's museum of works in rtificial stone in the New Road, London, we were much struck



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with the effect produced by the vase *fig.* 82. planted with a group of flowers. The flowers were of the commonest kinds. In the centre of the group were purple georginas; around these nasturtiums with their bright orange flowers, white phloxes, and mignonette; and, hanging over the rim of the vase, were long slender stolones of moneywort. The general effect was exceedingly good; and it immediately occurred to us to recommend this kind of ornament for gardens, especially for those of the town. Nothing, however, ought to be recommended without assigning reasons for doing so. Now, there are several reasons for recommending elevated vases as receptacles for flowers, in order that they may form ornaments for gardens in confined situations; and there are also reasons for recommending vases not to be filled with flowers for gardens in the country. We shall take these reasons in the order of their importance.

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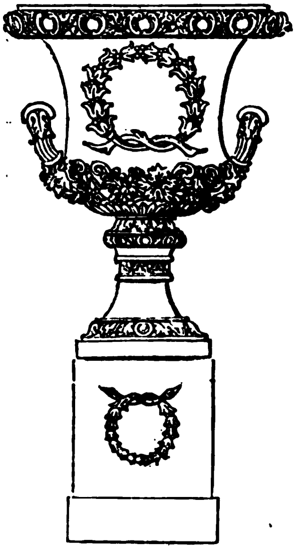

In the first place, town gardens, by which we mean chiefly the front gardens of street houses, are generally so confined by walls, that no herbaceous plant will thrive in them longer than one season. The cause is to be found in the want of air, of light, and of fresh soil. The soil, indeed, gets sodden by moisture and want of drainage to such a degree,

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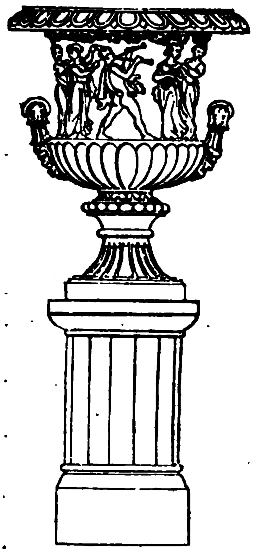

that no stirring or manuring will do it much good; and, therefore, if fine flowers are expected to grow in such gardens, the soil must be renewed annually, or at least every two years: but, even if the soil were renewed frequently, this would not supply the want of a free circulation of air. To attain this object, either the boundary walls of the front garden must be removed, and open iron railings substituted for them, or the beds or borders containing the flowers must be elevated as high as the walls. Sometimes the former mode might be adopted, but the latter will generally be found impracticable; and therefore, as a substitute for it, we would propose elevating the finer flowers in vases fixed on pedestals. The soil contained in these vases, however large they may be (*fig.* 82. is 8 ft. in diameter), could be renewed every year for a few shillings, and a fresh stock of plants supplied for a few shillings more. The vase would cost, perhaps, 3*l.* or 5*l.*; and this is actually less than what the renewal of the soil of the whole garden would cost every year, or at least every other year. If, however, this first cost be thought too great, smaller, and, of course, cheaper, vases might be employed, such as *figs.* 83, 84, 85, 86, and 87. One large vase, or one large and two small vases, would be quite enough for an ordinary street garden: for example, such as those along both sides of the New Road. The area of the garden might be of turf, of gravel, or paved, with a narrow dug border along each of the side walls and in front, planted with bulbs and the commoner evergreen herbaceous plants (such as pinks, saxifrages, &c.), with a few trees and shrubs of showy flowering kinds. If these front gardens were either wholly in turf, excepting always the walk from the gate to the door of the house, or wholly paved, with a very narrow marginal dug border, and the vase or vases forming a point or a line in the centre of the turf or pavement, they would look incomparably better than they do at present. They are now generally laid out entirely in dug beds, either on turf or with box edgings, and small narrow

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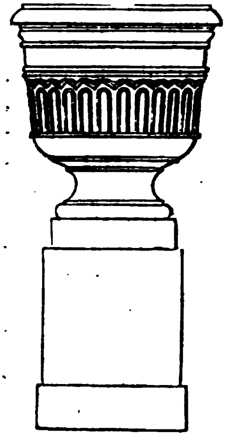

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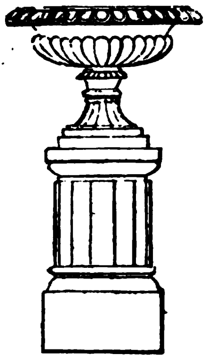

gravel paths; in which beds, for the reasons before given, fine plants never thrive, and which are exceedingly difficult to keep orderly and neat, though they never look well unless they are so. By the plan of having vases instead of beds, these gardens may be kept neat all the year round at a very trifling expense. In the summer the vases might be filled with showy flowers, and in winter either left empty or planted with evergreen shrubs and spring bulbs. Thus far as to what may be called the economical reasons for employing vases as receptacles for flowers in town gardens.

The next reason is, that these vases are beautiful objects, either with or without flowers. We are pleased to see flowers in them, because, in addition to the natural beauty of the flowers, there is the important one of their being presented to us in a new and striking situation. The value even of common flowers thus becomes enhanced; and what would hardly be noticed in a bed, or in a border, has a new interest, and a degree of dignity lent to it, by its being placed in a handsome vase elevated on a pedestal. The vase is beautiful as a work of art, whether it is filled with plants or not; but when it serves as a receptacle for fine flowers, in a situation where such flowers are not seen in beds or borders, its importance is increased by the additional beauty which it confers on them, in presenting them in a distinguished situation. There is a certain degree of distinction conferred upon a plant by placing it even in a common flower-pot; but where, instead of the common form and fragile material of the flower-pot, the elegant shape and durable massive appearance of the sculptured vase of stone (natural or artificial) is employed, the superior value of the latter must be felt by every one. A farther reason why the common flower-pot is deficient in dignity arises from its being portable, and generally placed on the ground; while the fixed and elevated vase, from its elevation, magnitude, weight, and solid foundations, has all the dignity and permanence of an architectural structure.

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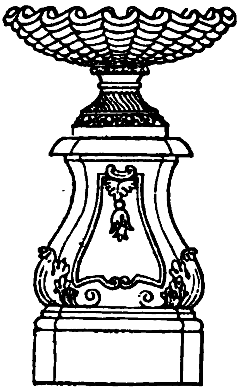


From the influence of fixed and elevated vessels, or other permanent structures, for containing plants, in giving consequence to them, has arisen, not only the employment of stone vases, but even of that description of rustic baskets and vases, for containing flowers, now frequently placed on lawns in extensive pleasure-grounds; and which are, as our correspondent Selim has so clearly shown (p. 485.), particularly suitable for cottage gardens. But the satisfaction which rustic vases give in such situations is far inferior to that produced by fixed stone vases in town gardens; because, in the latter situation, flowers of any kind are comparatively rare and cherished; whereas, in extensive pleasure-grounds in the country, where there are beds of pelargoniums and other flowers without end, it seems almost needless profusion to elevate them in vases. Hence it is, that when stone or pottery vases are introduced into gardens in the country, they are very seldom filled with plants of any kind. They are introduced there as beautiful works of art, to give pleasure, by their contrast, to the beautiful works of nature with which they are surrounded.

Another reason why vases of flowers should be introduced into the little walled gardens of streets is, that they harmonise admirably with the masonry and architectural forms by which they are surrounded. For this reason, also, stone vases should be sparingly introduced in pleasure-grounds in the country, except as appendages, or ornaments to architecture; such as on the parapets of terraces near the house, on the stone borders, balustrades, &c., of architectural flower-gardens, &c. They should never be set down on the naked ground, for the reasons which we have before given (p. 326.); and, above all, they should always have a fixed and permanent character. Even a common flower-pot, when fixed on a pedestal, assumes a character of dignity, which it never can have in a situation from which the spectator imagines it can be easily removed. Nay, more: a vase, or a common flower-pot, though it be not fixed by mortar or cement so as to become a part of the masonry on which it is placed, yet, if it is only set on a wall, or in any other position from which it cannot be removed without destroying the regularity or symmetry of the composition or whole to which it belongs, acquires a fixed and permanent character. This character is given when a flower-pot or vase is set on a wall, so as to form a termination to piers, pedestals, pilasters, or pillars of any kind: but place it on the coping of the wall, in the interval between such piers, &c., and its character becomes at once temporary and unmeaning: because there is no obvious reason for placing a vase there at all; for limiting the number to one; or for not moving it, either to the right or left, or even for not taking it away altogether.

If it be asked, why use vases in the country at all, unless plants are to be put in them? The answer is, they are employed as appropriate ornaments, as beautiful forms, and as articles of rarity and of value. But it may be farther asked, can an object be beautiful, or confer ornament on another object, when it is in itself of no use? Certainly it can. The noblest ornaments are those which are without use, in the common sense of the word; though, in the sense of art and refinement, everything is of use which adds to the strength of the emotion of that kind of beauty which it is desired to produce. What would be the splendour of the drawing-room, or the effect of the picture-gallery, without gilding? or an assemblage of highly dressed beauties, without those useless articles, diamonds and other precious stones? Nature has planted in the mind of man, from the rudest savage to the most refined philosopher, a capacity for deriving pleasure from beauty. It is necessary that this want should be supplied; and it will be found gratified, to a certain extent, in every stage in the progress of civilisation: partly by objects which are useful in the ordinary sense of the word, as dress, &c.; and partly by such as have no other use than the power of conferring ornament. In the rudest state of society, we have the tattooing and nose-rings of the savage; next the earrings, scarcely less barbarous, of a more civilised period: and, though these must pass away with the introduction of a taste more truly refined, the necklaces and bracelets, which are common to all ages and countries, will probably continue to be so, as long as women dress highly, and large parties are given by artificial light.

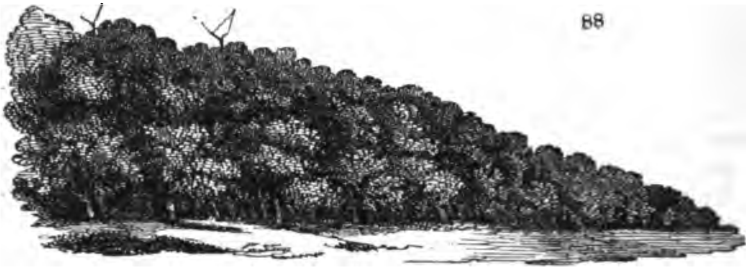
Another reason for the introduction of vases, and other architectural ornaments of a similar kind, both into town and country gardens, is, their tendency to create and cultivate a taste for natural beauty in the spectator; since, however paradoxical it may seem, it is, nevertheless, true that we can only be instructed in the beauties of nature through the medium of art. No person can either enjoy, understand, describe, or remember a landscape properly, who has not been instructed in drawing landscapes; any more than he could enjoy, understand, or analyse any particular style of writing, without having been taught grammar and composition. Teaching a person to draw trees, for example, is teaching him to find beauties in trees which he had never seen in them before. Setting before a person beautiful vases, is to familiarise him with beautiful forms, which he cannot help contrasting with ordinary shapes; and, according to his natural capacity, or the suitableness of his organisation for discernment in forms, he will find in the vases a unity of tendency in the lines which constitute their outlines, a symmetry in their general forms, and a richness, an intricacy, and a character of art in their sculptured details, which will induce him to search for these qualities in other objects of art, and to observe every tendency towards them in the works of nature. To such an observer, the productions of architecture and sculpture would assume a new interest; and he would gradually, and almost imperceptibly, acquire a knowledge of, and taste for, the beauty of forms and lines in objects generally. He would thus learn to distinguish symmetry, regularity, unity, variety, and other abstract qualities in works of art, which he would probably have never discovered in the forms of nature without such assistance; though they exist there, and are merely imitated by art in a way which renders them more obvious to untutored man, who sees only that mind in other things which he understands and feels in himself.

The last reason which we shall offer for the introduction of vases into architectural and garden scenery is, the gratification which such objects afford to the man of intelligence and taste. There are, perhaps, few objects, next to the human figure, which afford as many interesting historical associations as the vase. It may truly be said to be the first and the last production of the plastic art. The first utensil formed by man in the dawn of civilisation, in every country, is a vessel or vase for holding water; and that on which the highest resources of art are bestowed, in ages of the greatest refinement, is a vessel or vase for holding wine. In the first case, it is hollowed out of a gourd, or rudely shaped of clay and dried in the sun; and, in the latter case, it is manufactured of costly metals or precious stones; or, if of common materials, such as stone, earthenware, or glass, it is rendered valuable by the taste and skill bestowed on its form or its ornaments. The history of every country may be traced by its vases, no less than by its coins; and the history of all countries is set before us in the vases of all countries. It would be foreign to the object of this Magazine to say more on the subject: a little reflection will bring materials for thinking on it to the mind of every reader; and the young gardener will, we trust, after he has read and considered this paper, look at an ornamental vase, or even a common flower-pot, with a new interest.

ART. VIII. *On raising Plantations near the Sea.*

By Mr. T. RUTGER.

THE remarks and illustrations, by the Rev. W. B. Clarke, upon the effects of wind on trees growing on the coast near Poole in Dorsetshire (IX. 547.), and the annotations of J. D. upon that communication, and also upon mine upon nearly the same subject which precedes it, prompt me to enter more at large upon the subject of raising plantations near the sea. Mr. Clarke's profiles represent nearly all the types of the forms of the single trees that have ever come under my notice on the coast, that



were exposed to the south-west and north-west winds. The same effects are also to be seen in plantations that have been raised without being nursed either by the pinaster, or by some other sort of tree that will bear the winds on the coast without injury; and the sectional sketch (*fig.* 88.) will pretty nearly give an idea of the appearance of a wood of full-grown trees thus planted and exposed. The inference naturally arising from these effects is, that the trees nearest the outside, not having had any protection, have become stunted, through not being able to withstand the winds which are almost incessantly blowing from off the coast. Now, to remedy this evil the pinaster or cluster pine is well adapted, many proofs of which have come under my notice, in the counties of Devon and Cornwall.

To raise a deep plantation of forest trees on the coast in the above counties, in fully exposed situations, I would recommend that the whole of the ground intended for the plantation be ploughed (as, indeed, it should be for every plantation, in whatever situation) to the depth of at least 9 in.; that the whole be planted with pinasters at about 5 ft. apart; and that these be allowed to have not less than three years' growth before the forest trees are introduced, so that they may be capable of affording the latter immediate protection. This I have observed to be of the utmost importance; as, if the forest trees are planted at the same time with the pinasters, many of the former will become stunted, and will remain so until the pinasters afford them the necessary protection; sustaining, by this means, an injury, from which they will never properly recover, and to hide the effects of which a partial replanting must be made. If ploughing the ground be dispensed with, on account of the expense, or for any other reason, let holes be made of 15 in. diameter at the above distances, two or three months before the pinasters are to be planted; the earth from these holes should be laid up in hillocks to be pulverised, and the turf be laid on one side. On proceeding to plant, let the turf, if any, be chopped small, and put into the bottom of the holes; as this, during its decomposition, will considerably assist the growth of the young plants. If the ground is naturally inclined to grass or other herbage, great care must be taken to clear the young pinasters, and not to suffer them to be overshaded, particularly in a wet season; as instances have occurred where, for want of attention to this, nearly half the crop has been lost by the plants damping off near the bottom. With regard to the age of the plants to be inserted, those of two years' growth, and having been once transplanted from the seed-bed, are generally adopted; perhaps, not on account of their being cheaper than those which have been twice transplanted, but by reason of there being in the nurseries a greater number of them for sale: plants, however, of three years' growth, which have been twice transplanted, are by far preferable, and will amply repay the planter for their extra-price. In raising a plantation of forest trees on the coast, thus nursed by pinasters, the latter must always be considered of secondary importance; therefore, as soon as they have come in contact with each other, means must be taken to prevent the forest trees from becoming encumbered by the pinasters, either by lopping the latter, or by taking them entirely away by degrees, as it may appear necessary; at the same time taking care to leave a good breastwork of them on the outside, opposite to the coast.

With regard to the selection of forest trees, I have known failures to happen through the partiality of the planter to one particular species, for which there was no congeniality in the soil to be planted. I should, therefore, strongly recommend that a variety of species be introduced; and that, in the course of thinning, place be given to those which take the lead, or at least to such as promise fair to make fine trees of the most valuable kinds of timber.

The season made choice of for planting the pinaster is usually the months of March and April. The success of the plants depends greatly upon the weather in the two following months; if it be hot and dry, many failures are likely to take place: it is, therefore, a question with me if autumn planting would not be preferable, and experience in some measure confirms me in the opinion that it would; but, as the trial was only made in one instance, I do not feel myself at liberty to decide upon it. I can only say that, in the instance alluded to, very few failures occurred, which may be accounted for upon the principle that all evergreens derive great advantage from their foliage being kept moist for some time after being planted; which is more likely to happen in the autumn than the spring, particularly on the sea coast, where the air is mostly humid during the autumn and winter. The frost, also, is less intense near the coast, and, consequently, less likely to injure the trees, than it is in places far removed from the sea. The pinaster is rather a ticklish plant to deal with on removing it to the plantation. The sooner it can be planted, after it is taken from the nursery, the better; and its roots, even during the interval, should be prevented from being exposed to the air; great care ought also to be taken, when the plants are drawn from the nursery bed, to preserve all their fibres entire: this part of the business ought to be strictly attended to, as much of the desired success depends upon it. Whatever failures take place ought to be made good, the following planting season, with plants which have been twice transplanted, with which, under any circumstances, fewer failures occur, than with those which have been only once transplanted. Transplanting from the seed-bed to the plantation is by no means to be recommended; but, if done, I should advise that two or three plants be clumped together, as there is a danger of many failures in this mode of procedure: however, if it should be adopted, it will be necessary, in a year or two, to take away all the plants but one in each clump, leaving that which is most promising.

For all plantations near the coast, designed principally for ornament, I most decidedly recommend a line of the *Quércus I'lex*, or evergreen oak, to be planted on the outside (IX. 543.), at the same time with the pinasters. Ilexes are in the nurseries usually sown in pots, or they are transplanted into pots when a year old, and are in the course of two or three years fit to remove to the plantation with safety; if drawn from the nursery bed in the common way, even planted under the most favourable circumstances, success is very uncertain. Should planting in autumn be adopted for the pinasters, I should in that case recommend that the ilexes be turned out of their pots in the following spring. On transplanting ilexes into pots from the seed-bed, it may be well to mention that they will derive great advantage from being placed in a cold frame for a few weeks, and kept close, and shaded when necessary. The coarse lands in some parts of the west of England, and particularly in Cornwall, have sometimes a stratum of spar, consisting of small stones, lying on the surface, but more generally a few inches below it, the thickness of which varies from 2 in. to 3 in. or 4 in. Should this be the case where planting is intended, ploughing or breaking up the ground will prove of essential service to the future progress of the plantation.

The above hints are grounded upon the observations and experience of more than twenty years on the coasts of Devon and Cornwall; and may, I think, be fully recommended to the consideration of those who are desirous to raise plantations on the coast in that part of the kingdom. Perhaps some of your readers may be able to send you a few hints as to the suitableness of the pinaster, for the above purpose, upon other parts of the coast.

Shortgrove, Essex, November, 1833.

By observing the date of the above communication, it will be seen that Mr. Rutger had recommended the planting of the nurses three years before that of the trees they were intended to protect, prior to the publication of Mr. Bree's article (p. 295.), and that of Mr. James Munro (p. 405.), on the same subject. On the method of establishing trees in situations near the sea, we may refer to the above communications, and to IX. 543. 547. 549. and 715. — *Cond.*

Art. IX. *Short Communications.*

Experiments with Potatoes have been carried on, with great care, in the Horticultural Society's garden, for some years past, and the results given in two papers by Dr. Lindley, the last of which is just published in part vi. of the *Hort. Trans.*, vol. i. second series. From this paper it appears that the opinion entertained by Mr. Knight, and a number of other persons, of the superior production of whole tubers over sets, is unfounded. The same result, it is stated, has also been arrived at by Sir George Mackenzie, from experiments made by him in Ross-shire. Other instances will be found in our *First Additional Supplement to our Encyclopædia of Agriculture*, just published.

In planting a Vinery, Mr. Dowding, the celebrated grape-grower at Oakhill, near Barnet, [whose practice will be found registered in an excellent article by Mr. Forsyth, in our next] lays the ball of the plant on its side about 5 ft. from the front of the house, and covers the shoot with not more than 2 in. of soil from the root up to the front wall, where it is introduced into the house. A vinery was planted in this manner in June, 1833, and immediately after planting, three large hand-glasses were placed over each stem, in order, by concentrating and retaining heat and moisture, to cause the stems to root more freely. They grew admirably the first year, and they are now making such strong wood, and showing such strong eyes, that a very superior crop is anticipated by the third June after planting. — *Adolescentulus. Barnet, May* 15. 1834.

If *manure* be considered as the food of plants, lime and salts of different kinds may perhaps be considered correctives or condiments. There seems no other mode of accounting for the productive effect of lime, on soils where dung will do no good, than by supposing that it acts by dissolving or neutralising poisonous matters in the soil. These poisonous matters may, in some cases, be those exudations from the roots of plants, which of late years have given rise to the new theory of the rotation of crops. — *A. S.*

REVIEWS.

Art. I. *An Inquiry into the Causes of the Fruitfulness and Barrenness of Plants and Trees; with Practical Instructions for the Management of Gardens and Farms, and a System of training Fruit Trees, &c., founded on Scientific Principles. Arranged as a Dialogue.* By Joseph Hayward, Esq., Author of the "Science of Horticulture," &c. 12mo, 292 pages, cuts. London, 1834.

Mr. Hayward is advantageously known to our readers by his scientific communications in this Magazine, and by his work entitled *The Science of Horticulture.* The present little volume, he informs us in his preface, is to "convey, in a compact and simple form, the substance of the more important parts of his former works on horticulture and agriculture, together with the results of much subsequent observation and experiment." The work is conducted in the form of a dialogue, in which are discussed, in succession, the chemistry of vegetation, and the nature of soils and manures, or, as the author prefers to term them, the food of plants; the production of varieties; and vegetable structure, and vegetable diseases. This part of the work, which extends to 169 pages, constitutes the science of cultivation; and the remaining part is occupied with "A System of Practice founded on the Science." We have our doubts as to some points of the practice, particularly as to the mode of training the peach; and we cannot assent to the assertion (p. 37.) that "worms do not in any manner injure living plants." Every one who has had the care of plants in pots must be of a different opinion. However, with a very few exceptions of this kind, which the practical man can easily guard against, we consider the work a valuable accession to horticultural literature; and, as it is cheap (2*s.* 6*d.*), we would very strongly recommend it to every young gardener: for in nothing do we more heartily concur with Mr. Hayward than in this, — "that the most valuable part of the knowledge which a thoroughly sound and accomplished horticulturist or agriculturist should possess, will be found, on enquiry, to be of such a nature that it not only may, but must, be obtained by reading." (p. 4.)

Art. II. *Transactions of the Horticultural Society of London.* Second Series. Vol. I. Part III. 4to. London, 1833.

(*Continued from* p. 230.)

30. *Notes on the Sowing and Cultivation of the Sheeraz Tobacco.* By Dr. Riach, of the Hon. East India Company's Medical Service.

The plants are grown till they are between two and three feet high, at which time the leaves will be from 8 in. to 15 in. long. At this period all the flower buds are pinched off. The leaves increase in size and thickness, until August or September, when each plant is cut off close to the root; and, instead of being laid down, or carried off to be dried elsewhere, it is stuck firmly into the ground close to the root from which it has been separated. In consequence of the heavy dews, the leaves change gradually from green to yellow; and they are then, while they are yet wet with dew, taken to a shed with wickerwork, or other partially open side-walls, and laid in a heap for four or five days. The stalks, and centre rib of each leaf, are then removed and thrown away. The leaves are again heaped together for three or four days more; after which, they are in a fit state for packing and being sent to the manufacturer.

31. *Upon the Cultivation of Tobacco for Garden Purposes.* By Mr. John Wilson, Under-Gardener at the Society's Garden at Chiswick.

Every gardener ought to grow his own tobacco; and, as this article is, in our opinion, the most valuable one on the subject which has anywhere appeared, we shall give it almost entire.

"Tobacco is an article which is indispensable to horticultural purposes. It is used to fumigate hot-houses; large infusions of it are put into most washes that are prepared for extirpating insects; and, by drying, and grinding it into the form of snuff, it is found very efficacious in destroying the green fly on peach and rose trees out of doors.

"In most gardens, the leaves are stripped off the plants in a green state, and thrown together in a heap to ferment; while, little or no attention being paid to the degree of temperature which such fermentation should reach, the usual consequence is burning or rotting the leaves. Tobacco so treated has neither the taste, the smell, nor the efficacy of tobacco, and, when burnt in hot-houses, is by no means effective in killing insects, without a great proportion of regularly cured and manufactured tobacco being burnt along with it. Hot-houses also smell very disagreeably for eight or ten days after being fumigated with it.

"Mr. Brodigan's mode of curing, as detailed by him in his work on the growing and curing of tobacco in Ireland, has been tried in the garden, and it was found that the leaves began to suffer from heat at many degrees below the maximum temperature mentioned by Mr. Brodigan, which is 126°. This is an extreme, which, it is to be presumed, will readily account for the great waste of tobacco during the curing process in Ireland. Taking off four or five of the bottom leaves of each plant, suffering them to lie on the ground for some time, gathering and carrying them home to a barn, fermenting them two or three times, spreading out as often to cool, and finally hanging them on lines of packthread to dry; all which has to be repeated when a few more of the lower leaves are considered ripe, must also be attended with very great labour and expense.

"The principle of fermenting tobacco in a green state is sanctioned by a long course of practice; but, from every observation of its effects which has been made here, it seems to be productive of the worst of consequences; for it is dependent upon conditions so difficult to govern, that, notwithstanding the greatest care, it never fails to be injurious to the tender leaves.

"The sort which is grown here for the purpose of fumigation, &c., is a very large-leaved variety of Virginian tobacco, which was obtained from the Sandwich Islands: it is the best which has yet been received at the garden.

"In the last season it was managed in the following manner: — The seeds were sown about the middle of March, covered very lightly with fine loam, and placed upon a moderate hotbed. When the plants were come up, and had acquired sufficient strength, they were pricked into shallow pans, about two inches apart; they were then gradually inured to the open air on good days, and finally planted out in the middle of May, at 3 ft. apart, in rich ground. They were shaded with flower-pots, and occasionally watered, till they had taken root and begun to grow. No more attention was bestowed, except keeping the ground clean, until their lateral shoots began to show themselves, which were constantly kept pinched off as they appeared: these, if suffered to remain, would have had the effect of very much reducing the supply of sap from the useful leaves of the plants. They were topped at sixteen or eighteen leaves, according to their strength. The tobacco was ripe in the beginning of September, as was indicated by the leaves becoming mottled with yellow spots, those at the bottom more so than at the top of the plant; they were also more glossy and shining than before.

"The mushroom-house, being at this time disengaged, was thought an eligible place for the curing process. The plants were taken up quite dry, with a few of their roots; but no particular attention was paid to saving many of the latter, as the object was only to avoid breaking the bottom leaves (which might have been the case by cutting the stems). The plants were carried immediately to the house, and hung on nails in the walls, and on ropes in the middle of it. When all had been brought into the house, it was shut up quite close, the fire lighted, and the temperature kept to 70°, until the leaves got completely yellow, which they did in four or five days. The heat was then raised to 75°; and, in about a week, the leaves, with the exception of the midribs, were cured, and of a fine brown colour. The heat was then increased to between 80° and 90°, and, in five days, the midribs were so completely killed that the thick ends of them would have broken immediately on attempting to bend them. The leaves were now very much curled, and dry as fire could make them; and, if subjected to any pressure, would have crumbled to snuff. Fire was discontinued, and the floor of the house well watered. This was repeated as it evaporated; and, in twenty-four hours, the leaves were as soft and pliable as could be desired: they could now be handled without breaking or wasting them. When stripped off the stalks, they were stretched out singly, and laid above one another, smoothing them gently with the hands. When all were laid out neatly, they were well pressed, to give them form, and keep them smooth; they were then tied in hands of about half a dozen leaves in each, and packed into a tub, being well pressed as they were put in. In this way they remained a fortnight, when they began to mould slightly at the midribs, in consequence of the weather being moist and warm. They were then rehung in the house, and very gradually dried by fire heat; were afterwards brought to a moist state, in the manner above described, and finally were repacked in the tub, where they now remain, well pressed, and in a good keeping state. The tobacco continues to improve in smell and appearance with its age.

"There can be no doubt that this tobacco is as good (unless in respect of age) as much of that which is imported from America. It has yielded in the proportion of 2420 lbs. to an acre, being half a pound to every plant, each occupying three square feet.

"The important points in the above mode of curing are, to carry the plants to the house whenever they are taken up; for, if the sun be bright, the leaves would sunburn in a short time. The leaves require to be yellow before the heat is increased, otherwise the tobacco would cure too light-coloured; and the midribs must be completely killed before the leaves are taken off the stalks; for, if not once made very dry, they would never keep.

" The power which the leaves possess of absorbing moisture, in a damp atmosphere, is immense, and very curious: a person unacquainted with it would not believe, on seeing a leaf in its driest state, that it could ever be brought back so as to be again pliable.

" The number of leaves that each plant ought to be allowed to produce should be determined by the quality of the ground, the earliness or lateness of the season, &c.: when these combine to the advantage of the plants, they are able to perfect proportionally more leaves. By a timely and careful attention to such circumstances, and by pinching off the lateral shoots, the climate of England, or that of Ireland, is in every respect sufficient to the full perfection of tobacco. Four months are not fully required to bring it to maturity.

" In the case of large plantations being made, shading would be attended with considerable expense: it is not, however, of absolute necessity; for, when tobacco plants are pricked out some time previous to planting, they make good roots, which are of greater benefit to them, after they are planted, than shading is. The latter, however, is practised in England and Ireland, and is certainly useful; but it is by no means an essentially necessary part of the management of tobacco. The leaves flag under a hot sun; but, if the ground is moist, quickly recover. When the danger of late frosts is over, it would seem best to commence planting; if, however, from apprehensions of any description, the tobacco is not got out till the latter end of May (and it need never be so late), even at that time there could be no danger of its ripening. Planting, in Ireland, is [was] continued considerably later than this.

" The mode of curing thus described, or one very similar to it, would seem to remedy the defects complained of in Ireland; namely, the great waste of the article by repeated fermentations. To this mode no such objection can be found; and, if adopted in Ireland, it would be incomparably less labour and expense, than the present mode of management in that country.

" The Irish planter would, however, require a firing-house in addition to the barn or shed spoken of by Mr. Brodigan. It could be of any dimensions. A short wide firing-house would be best adapted for the purpose, with a flue running along the centre. A very small house would cure an amazing quantity of plants; for, when they are taken up, their leaves begin to fall almost immediately, and lie upon the stalks; and, when they get to the brown colour, do not occupy much more room than the stalk itself. The plants could first be hung in the open shed, where rain and sun ought to be kept off; in this shed the leaves would come to the yellow state before mentioned, when they might be removed to the firing-house." (p. 213.)

32. *Upon grafting the Walnut Tree.* By T. A. Knight, Esq., F.R.S. Pres. H.S. &c.

Young or last year's wood is employed both as the scion and as the stock; and both scion and stock are allowed to unfold their buds, and grow for a week or ten days, before the operation of grafting is performed. Previously to doing this, the young shoots and foliage are rubbed off. Out of twenty-eight instances, twenty-two grew well, many producing shoots of nearly a yard long, and of very great strength. " The scions were attached to the young (annual) wood of stocks, which were between 5 ft. and 8 ft. high; and in all cases they were placed to stand astride the stocks, one division of the scion being in some instances introduced between the bark and the wood; and both divisions being, in others, fitted to the wood or bark in the ordinary way. Both modes of operating were equally successful. In each of these methods of grafting it is advantageous to pare away almost all the wood of both the divisions of the scions; and, therefore, the wide dimensions of the medulla in the young shoots of the walnut tree do not present any inconvenience to the grafter." (p. 216.)

33. *A Report upon the best Varieties of the Gooseberry cultivated in the Garden of the Horticultural Society at Chiswick.* By Mr. Robert Thompson, Under-Gardener in the Fruit Department.

In this paper, gooseberries are divided into "two races (small and Lancashire); each of which may be separated into four divisions (red, yellow, green, and white); and these, each into three subdivisions (hispid, downy, or smooth), which are capable of being farther divided into two sections (round or oblong), making in all forty-eight groups." The number of sorts enumerated are seventy. In our *Encyc. of Gard.*, new edit., p. 930., Mr. Thompson has classed the gooseberries in the same manner; but, as our object was selection, he has enumerated only fifty-six sorts; quite enough, in our opinion, for any garden whatever.

34. *A Note upon the Black Corinth Grape.* By Mr. Robert Thompson, Under-Gardener in the Fruit Department of the Society's Garden at Chiswick.

This is the grape which produces the corinths, or currants, of the shops, and it is merely figured and described here, because there is great uncertainty in procuring it correctly from the nurseries. It will be found in its proper place in our *Encyc. of Gard.*, new edit.

ART. III. *Report of the Exhibition of Agricultural Productions, new Implements, &c., at the Premises of Dickson and Turnbull, Nursery and Seedsmen, Perth; open from November,* 1833, *to April,* 1834: *to which are appended Original Essays on the Utility of Agricultural Museums, the Cultivation of Natural Grasses, and the Rot in Larch.* Small 8vo, 66 pages. Perth, 1834. 1*s.*

THE eminent success which attended the Stirling Agricultural Exhibition, by Messrs. Drummond, whose *Report* we reviewed in IX. 447., has led to a similar exhibition in Perth, a county which has long been distinguished both for horticultural and agricultural eminence. It is gratifying to find, from the preface, that the liberal and enlightened views of Messrs. Dickson and Turnbull have been amply seconded by the farmers and horticulturists throughout the county, and even in adjoining counties. "That the farmers and others of Perthshire would easily perceive the benefits likely to result from such an institution, we never doubted; and, had any thing been wanting to persuade us of this, we should have been fully convinced of it by the manner in which both farmers and horticulturists have come forward with samples of their various productions. Indeed, when we think of the circumstance of this having been the first season of the institution here, and also of the very brief period that elapsed betwixt our giving publicity to our intention and the time of the exhibition opening, it is astonishing to remark the number of specimens of the various sorts of grain, fruits, and other productions that have been sent us: and, as nothing can give us more real gratification than to be able, by any exertions of ours, to forward the interests of the agriculturist, the more especially when we perceive those exertions to be in the way of benefiting all classes of the community, we must be allowed the pleasure of auguring favourably for the success of this institution from the support it has met with at its commencement." We give this quotation in the hope that it may lead to similar exhibitions in other districts; and nowhere are these more wanted than in England. Among the exhibitors, we find our valued correspondent Mr. Gorrie; and also Mr. Bishop of Methven Castle, and Mr. Young of Pitfour, stand preeminent.

Among the articles exhibited were, wheats in straw, twenty-nine specimens, including nearly half as many varieties; some from Tuscany, Tangier, Nepal, South America, &c. Wheat in sample, fifteen specimens, including Talavera wheat, and the blood-red; with the Mungoswells variety, which appears to be held in much esteem. Of barley in straw, there were twenty-five specimens; including one from Morocco, which yielded 20 sacks per acre, on a short and stiff straw, not liable to lodge. Of barley in sample, there were seventeen specimens; including one from Tangier, and another from China. Oats in straw, thirty-three specimens; including the Hopetoun oat, which, on one farm, had grown to the height of 6 ft. 2 in. over the whole field; also the naked oat, said to have been well known in the country two hundred years ago. Oats in sample, fifteen sorts; among which, as also among the oats in straw, the Hopetoun and potato oat held conspicuous places. The brown Riga, introduced by Mr. Gorrie, also promises well. Beans of two sorts. Peas of two sorts; including the Napoleon pea from Mr. Gorrie, a species of *Vicia* used on the Continent as green peas; and the black-podded pea from Van Diemen's Land, also from Mr. Gorrie, and likely to prove an excellent field pea. Tares, two sorts. Turnips, sixty-five specimens; with the weight of each, and other particulars. The produce of Dale's hybrid we observe stated at 45 tons per acre. Carrots, sixteen sorts from gardens, and two from fields: the heaviest of these was an Altrincham weighing 3½ lbs. Potatoes, twenty-six sorts; including an early white variety from Aberdeen, which produced, on a small spot, at the rate of 222 bolls of 560 lbs. each per Scotch acre. We may also mention "a permanent white variety, obtained by cutting out and planting the variegated part taken from the red potato, performed by a female horticulturist, from Mr. H. Bishop, New Scone." In thanking the female horticulturist for the result of her ingenious experiment, Messrs. Dickson and Turnbull gallantly observe: — "If ladies would only take the lead, the young farmers would soon follow them in studying the science of vegetable physiology." We entirely concur in this opinion; and only wish that, in addition to vegetable physiology, ladies would study the natural system of botanical classification; direct their attention to trees and shrubs, so as to introduce a greater variety in our shrubberies and plantations; and not forget altogether landscape-gardening and domestic architecture and furniture.

Of mangold wurtzel three specimens were exhibited, the heaviest weighing 9 lbs. 9 oz. It seems to be a general opinion that Perthshire is the most northerly point in Britain where the field culture of mangold wurtzel can be carried on with profit. Red beet, four specimens; and silver beet, one specimen. Among the miscellaneous articles were cardoons, celery, succory, onions, a great variety of the cabbage tribe, a new variety of saintfoin (*M*elilòtus officinàlis), sown by Mr. Gorrie on the 9th of April, and pulled on the 1st of October. "When sown in September, and allowed to ripen its seeds, it grows 5 ft. or 6 ft. high; but, if cut before flowering, it will yield a second crop; and, sown on stubble, will form an excellent substitute for clover when that plant is found to have failed." *T*rifòlium incarnàtum is used for this purpose in England; but Mr. Gorrie is of opinion that the *M*elilòtus officinàlis, or true Irish shamrock, as it is by some considered, is a preferable plant for Scotland. Gaulthèr*ia Shállon*, it is found, may be successfully cultivated in heathy woods and on waste moorlands, so as to afford a welcome repast to both grouse and pheasants. This has been done by Mr. Bisset of Methven Castle gardens, and also by a gentleman of our acquaintance (Mr. Carpenter), on Tweedside. Most of our readers know that the G. *Shállon*, introduced by Mr. Douglas from the north-west coast of North America, is a beautiful dwarf evergreen shrub, bearing edible berries. *O*'xalis tetraphýlla, from Mr. Gorrie, raised in the open air during summer, but kept under glass during winter. In Prussia, this plant is used as an edging; and its leaves as sorrel, mixed with those of New Zealand spinach to improve its flavour. The flavour of the bulbs resembles that of potatoes. Fine samples of potato flour were exhibited; and it appears that the proportion of flour is to the weight of raw potato as 1 to 10 on an average.

Among the fruits exhibited were some hundreds of varieties of pears and apples, including many of the new sorts introduced from France and the Netherlands; also a small branch, about 7 in. long, containing about 100 cherries, which grew in the New Row Green, Perth, twenty-two years ago, preserved in a glass [in spirits, we presume].

Above thirty specimens of grasses were exhibited by Mr. Bishop of Methven Castle. *E*lymus sibíricus produces a weighty crop; and, being eaten by animals with avidity, it deserves the attention of agriculturists. *P*òa nemoràlis forms a dense sward under the shade of trees; and, as we have before observed, is valuable in pleasure-grounds. A grass of uncommon formation, from New Orleans, whose properties are not known; and one of Mr. Drummond's newly discovered grasses, from the north-west coast of North America, were exhibited. Messrs. Dickson and Turnbull truly observe, that the advantages offered by the introduction of different sorts of pasture grasses into culture is becoming every season more obvious. They trust soon to see farmers aware of the importance of the subject; and, when that is the case, they anticipate pastures of a much more luxuriant verdure than are at present to be found in Perthshire. Among the communications is an excellent essay on this subject, by Mr. Bishop of Methven Castle.

The samples of grass seeds were numerous; and, among them, one of Italian rye grass, from Mr. Lawson, seedsman, Edinburgh. There were also specimens of articles from Messrs. Drummond of Stirling; both cases affording a gratifying proof of the good feeling which subsists in Scotland among persons following the same pursuits; not only in the usual routine of business, but in the extraordinary exertions displayed in the establishment of these exhibitions. Among the specimens of grasses exhibited were two of an Italian rye grass; which, with Mr. Gorrie, has produced two crops in a year. A variety of samples of agricultural seeds were exhibited by Nash and Co. of London; and an extensive collection of grass seeds and specimens, and also numerous species of pines and firs in pots, from Messrs. Dickson and Turnbull's own nursery. Mr. Gorrie produced fine specimens of larch wood in which the rot had commenced. (See our next.) The trees, for the greater part, had been grown on land previously occupied by the Scotch pine. Mr. Young, gardener at Pitfour, also exhibited specimens of larch. "Specimens of larch, showing the commencement and progress of decay: they were planted in 1825, on ground previously occupied, for upwards of sixty years, with the Scotch pine; the soil thin clay, considerably impregnated with iron, on a subsoil of clay in vertical strata, forming an easy subsidence for moisture, on an elevation of about 20 ft. above the level of the sea. They were planted as nurses for oak, at the rate of about 3000 per acre; upwards of 6000 have this year been cut, out of which not more than 50 sound trees could be picked. Larch growing on the same soil, about sixty years old, had one in six or eight which showed slight symptoms of decay; but the timber, in general, was of excellent quality." (p. 41.) The attention of landed proprietors and foresters is directed, by Messrs. Dickson and Turnbull, to the probability of the rot in larch being produced to an alarming extent on land previously occupied by Scotch pine; a result which seems proved by the specimens exhibited by Mr. Gorrie and Mr. Young. (See, also, VII. 374., and IX. 551.)

Models of various kinds were exhibited: three ploughs, made by ploughmen; one of a moss-house, by a boy of sixteen years of age, presented by Messrs. Drummond and Sons of Stirling; a model of a hollow brick wall; portraits of prize cattle; a machine or swoop (see *Encyc. of Agr.*, § 2729.) for conveying hay from the small coil [haycock] to the rick hay turner (or, as it would be called in England, the large haycock, the mode of making hay in the two countries being quite different: see *Encyc. of Agr.*, § 5791.); machine for compressing peat, which will be found in our *First Additional Supplement to the Encyclopædia of Agriculture;* verge-cutters, horse-hoes, cheese-pressers; models of drains; wedge-drain spades; cheeses; and, lastly, books. The essays, the titles of which are given at the head of this article, are unexceptionable, both in matter and style.

We have been thus particular in giving the contents of this tract, in order to show how easy it would be for seedsmen to get up similar exhibitions in every county town. The object is less to get new and strange articles, than to assemble together such things as are already in the county or district, in order to facilitate comparison, and equalise the knowledge of the existence of such things. This alone would lead to the examination of the exhibitions of adjacent counties, and to the introduction of articles from them; and thus improvements of every kind would be surely and rapidly propagated throughout the country. We would direct the attention of agriculturists everywhere, and more especially in England, to the great number of varieties of wheat, barley, and oats exhibited at the agricultural museums of Perth, Stirling, and Edinburgh, and to the superior excellence of some of them. We would recommend trials to be made in England of the Nepal wheat, the red-awned oat, the blood-red wheat, the Mungoswells wheat, the Morocco barley, the Tangier barley, and the chevalier barley. Nepal wheat sown in the Earl of Mansfield's kitchen-garden at Kenwood, on July 11., was in full bloom on Sept. 12., when we called there. Lord Mansfield strongly recommends *Lupinus polyphyllus* as spring food for sheep.

ART. IV. *A new Descriptive Catalogue of Roses.* By T. Rivers and Son, Nurserymen, Sawbridgeworth, Herts. In one imperial folio sheet, for sending as a single letter by post.

WE have before strongly recommended this catalogue (IX. 458.); and the present new edition of it is considerably enlarged and improved. The following extracts will show the arrangement, as well as record some valuable remarks on the culture of the different divisions: —

Moss Roses, 17 sorts. " Most of the varieties prefer a cool soil, though Mossy de Meaux is, perhaps, an exception, as it seems to flourish better in light dry soils. The White moss, unless budded on the dog rose (*Ròsa* canìna) will not, in general, grow well; its sickly appearance in some situations may be often traced to its being worked on some improper stock. If on its own roots, in rich soils, it will often change to pale blush. All are well adapted for standards; but, to have them in perfection in warm dry situations, in March put round each stem, on the surface of the soil, the fourth of a barrowful of manure; on this place flints or moss, to take off its unsightly appearance, and make a little ornamental mound. This treatment will keep the soil cool, and make them bloom in a most superior manner, even in situations previously thought to be most ungenial to their culture. The manure should be spread on the surface in November, and lightly forked in."

Perpetual Roses, 29 sorts. " These, with the exception of Perpetual Scotch, Stanwell perpetual, and Pompone four seasons, are all varieties of *Ròsa* damascèna, or the Damask rose. They are, perhaps, the most desirable of all the pleasing families of *Ròsa*. Like their prototype, they are highly fragrant, and, if possible, more so in September, October, and November, than in June. As every shoot in most of the varieties produces bloom, the soil cannot be too rich; for, with these, luxuriant growth will be sure to give abundance of flowers. A good practice would be to cut off all the bloom-buds in June, and shorten the shoots to about half their length; then water them with manured water in July and August; this will make them shoot and bloom most luxuriantly all the autumn."

Hybrid Roses, 66 sorts. " The varieties of this distinct family are principally between the China rose (*Ròsa* índica) and *Ròsa* gállica. They are all very beautiful and distinct, and have that pleasing, glossy, sub-evergreen foliage, peculiar to the China rose; but make a great deviation from that family, in not being perpetual bloomers. In this division are some of the most beautiful roses known; and among them George the Fourth, raised from seed by T. Rivers, jun., may rank among the best. These are also all very robust, and will grow and bloom well in the most unfavourable rose soils. Their peculiar habit and vivid colours render them particularly well adapted for standards."

Select Roses, 70 sorts. " In this division are many varieties of *Ròsa* gállica, and also many hybrids between *R.* gállica and *R.* centifòlia, &c. &c. The varieties selected are all fine and distinct, and will be found well worth cultivation."

Varieties of Ròsa *álba*, 9 sorts.

Provence Roses, 16 sorts. " The Provence rose is the *Ròsa* centifòlia of botanists, the Cabbage rose of the English gardens, and the *Rose à cent feuilles* of the French. All its varieties are extremely fragrant, and some very beautiful. The Provence rose of the French catalogues is our *Ròsa* gállica."

Noisette Roses, 44 sorts. " This division, with the Perpetual roses, will ultimately be the ornament of every British garden: the astonishing multiplicity and constant succession of flowers (till the chills of November prevent the opening of the buds) make them highly interesting. They are all very hardy, and, as standards, seem to show their varied characters with better effect than as dwarfs. Those kinds are indicated which, from the length and flexibility of their shoots, are adapted for rose pillars."

Climbing Roses, 42 sorts. " A decided and rational objection has been made to tall standard roses; but, with the aid of this graceful division, they can be formed into objects of high artificial beauty. We will suppose a tall tree rose, with a fine head of Crimson perpetual, or George the Fourth roses, in full bloom, its stem covered with the pure white blossoms of *Rȯsa* sempervìrens plèno, or some of its beautiful varieties, such as Princess Louise, Félicité perpétuelle, &c. &c.: to the lover of roses, this hint will convey the *beau idéal* of all that is beautiful in their culture."

Tea-scented Roses, 37 sorts. " The greater part of these are new to the English cultivator: all have that peculiar fragrance which the French have taught us to call tea-scented. Unless on very warm and favourable soils, these, as dwarfs, require careful cultivation, and must have a raised border against a south, south-east, or west wall. This border should be a compost of rotten manure or leaves, light loam, and sand, equal parts, and raised about 18 in. above the surface. When grown as low standards, they are surpassingly beautiful: but they should be taken up in November, and their roots laid in mould, in a shed, as our sharp winters would injure them, so as to prevent their blooming in perfection, if left exposed."

China Roses, 49 sorts. " From six to eight months in the year, the roses in this division form bright ornaments to our gardens. Many of the robust varieties make beautiful standards. They are all perfectly hardy. The sorts first in the list are quite new and very beautiful."

L'Isle de Bourbon Roses, 11 sorts. " This is a most beautiful family, scarcely known in this country. They seem to form a distinct division of China roses; like them, they are perpetual; but they have a luxuriance and gracefulness quite their own: the perfect and elegant form of their flowers, the extremely delicate tints in some, and vivid rose colour, so peculiar to these varieties, in others, will soon establish them in the favour of the rose amateur. As standards, they grow most luxuriantly, are quite hardy, and bloom in greater perfection late in autumn than any other Perpetual rose."

Musk Roses, 7 sorts. " These are interesting from their powerful fragrance and autumnal flowering. The Old white is one of the oldest inhabitants of the English gardens."

Scotch Roses, 22 sorts. " These are all emanations from the *Rȯsa* spinosíssima, or Wild rose of Scotland; and the above selection gives a representative of each shade of colour. Out of a collection of 200 nominal varieties from Scotland and elsewhere, twenty-two are all that can be recommended as tolerably distinct. These form so gay an assemblage among May flowers, that a clump or border ought to be devoted to them in every flower-garden. The shape of the flower in these is peculiar and similar, being nearly globular."

Miscellaneous Roses, 72 sorts, which are not described.

General Remarks on the Culture of Roses.—Referring to the directions for rose culture given in their Catalogue for last year, and quoted in IX. 458., Messrs. Rivers observe, that they " still think that, in unfavourable soils, roses require being removed, and their roots trimmed, every third or fourth year. In cold clayey soils, the best compost for them is rotten dung and pit sand; in warm dry soils, cool loam and rotten dung. Annual pruning, which is quite essential, should always be done in October or in March; but October pruning will be found greatly advantageous, as the rose will then prepare itself during the remainder of the autumn for vigorous growth in spring. The families of roses are now so well defined, that each ought to have its department: a clump of hybrids for their gorgeous colours in June and July; of perpetuals, for their fragrance in the cool autumnal months; of Noisettes, for their elegance and abundance of flowers; and of Scotch roses, for their precocity and humble growth. In short, all the thirteen families above enumerated require separate culture to have them in perfection; but this, of course, will only apply to rather extensive flower-gardens. Climbing roses for pillars should be planted in a very rich soil, as they will then put forth strong central branches, of 8 ft. or 10 ft. in length; these, when fastened to the stakes, will furnish a plentiful supply of lateral blooming shoots for many seasons. The application of climbing roses to cover a sloping bank, their flexible branches being pegged to the ground, is, perhaps, a new idea. Thus treated, they will form a beautiful carpet of foliage and flowers; the dark crimson and white varieties blending with peculiar elegance. The majority of roses bloom much finer when budded on the dog rose than under any other mode of culture. The great objection is, their throwing up suckers so as quickly to impoverish the budded part of the plant. To remove these as soon as they appear, the gardener must be continually on the alert."

We have no hesitation in stating it as our opinion, that this is by far the most useful catalogue of roses which has yet been published either in France or England. The collection, though select, is sufficiently ample for every purpose; and the descriptions are such, that any person who reads them, with a view to becoming a purchaser, is in no danger of buying the same rose under different names; which can hardly be avoided when choosing from mere lists of names without descriptions. The prices of the described sorts vary from 1*s.* 6*d.* to 7*s.* 6*d.*, not above a dozen being at the latter price. The miscellaneous roses are sold at 2*l.* 10*s.* per hundred; and a general mixture of sorts is 1*l.* 5*s.* per hundred.

Art. V. *Floricultural and Botanical Notices of new Plants, and of old Plants of Interest, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; each monthly number containing eight Plates; 3*s.* 6*d.* coloured, 3*s.* plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; each monthly number containing eight plates; 4*s.* coloured, 3*s.* plain. Edited by Dr. Lindley, F.R.S., Professor of Botany in the London University.

Polypetalous Dicotyledonous Plants.

A Twining Leguminous Plant which inhabits St. Kitt's. — We have received, for distribution, from the botanic garden at Bury St. Edmunds, a portion of legumes and seeds of a plant of this kind, which had been presented to that establishment by J. E. A. Sadler, Esq. M.D., of St. Kitts. Dr. Sadler conceives that the plant is an undescribed one; and, from his description of it, we present as follows: — It has trifoliate leaves, and axillary flowers on long footstalks. The corolla is of a pink colour, with a greenish spot at the base of the vexillum. The calyx has two little bracteas at its base, is 4-cleft, persistent, and has a gland at the angle of each sinus. Vexillum obovate, reflexed. Wings unguiculate, each with a tooth. Stamens diadelphous. Stigma simple. Legume hairy, each seed embedded in its own separate membrane. We hope that some of those to whom we have imparted the seeds will, if plants be produced from them, ascertain the species, and inform us what it is.

2072. INDIGO'FERA.
18685*a* violàcea *Rox.* purple-*corollaed* ■ ⌴ or 5 P.Ro E. Indies? 1819. C s.l Bot. mag. 3348

This, in the open air in the Edinburgh Botanic Garden, where it has stood several years, proves a very handsome shrub. It flowered there, for the first time, in July, 1834: it was received there, in 1820, from Mr. Thomas Hogg of Clapton. The leaves, pinnated, are 2½ in. long. The clusters of flowers are axillary, longer than the leaves. The flowers are from twelve to twenty in a cluster. Corolla large and handsome: the standard of a reddish purple passing into lilac; the wings of a deep rose colour. (*Bot. Mag.*, Sept.)

Acàcia lineàta *Cun.*, No. 24673. in *Hort. Brit.*, is figured, from Kew, in *Bot. Mag.* t. 3346.
Lupìnus nànus *Benth.* (see X. 173.), a lovely annual species, is figured in *Bot. Reg.* t. 1705.

MONOPETALOUS DICOTYLEDONOUS PLANTS.

CLXIV. *Campanulàceæ.*

607. CAMPA'NULA 4978 macrántha, large-flowered
2 polyántha *Hook.* many-flowered ♃ △ or 5 jn.jl B Russia 1830. D co Bot. mag. 3347

C. macrántha itself is a most estimable ornament of the hardy flower-garden; and the present variety, C. macrántha var. polyántha, is described, and, by the figure, seems, to be one still more so. "It is a taller plant; the flowers are larger, of a bluer colour, and much more numerous upon the stem." The figure is from a plant in the Glasgow Botanic Garden. (*Bot. Mag.*, Sept.)

CLXX. *Erìceæ.*

521. AZA'LEA 4841 índica
var. laterítia *Lindl.* brick-red-*corollaed* ■ ⌴ or 2 my Bri China 1833. C p Bot. reg. 1700

A beautiful variety, introduced from China by Mr. M'Killigan (see IX. 474.), along with the lovely variegated-corollaéd kind; and, with it, was purchased by Mr. Knight. The plant is remarkably bushy, and abundant in leaves. These are smaller than in A. índica itself, of a deep green, with a rusty tinge from numerous brown hairs disposed about the midrib and margin: their surface, too, is covered with hairs. The flowers are of a bright clear brick colour, a little tinged with rose. (*Bot. Reg.*, Sept.)

CLXXXVI. *Compósitæ* § Helichrỳseæ.

RHODA'NTHE *Lindl.* (*Rhodon*, a rose, *anthos*, a flower; inner scales of the involucre rose-coloured.) 19. 1. Sp. 1.— [1832? S lt Bot. reg. 1702
Manglèsii Lindl. *Capt.* Mangles's ○ ⌴ or 1½? my.jn Ro.Y Swan River Col. New Holland

A charming green-house annual, introduced, from the Swan River colony, by Capt. Mangles, R.N. This is the species of plant to which a prize was awarded by the Horticultural Society, as noticed in p. 412. Its habit seems peculiar: the stem bears broad leaves, which are quite smooth and rather glaucous; and is divided, upwards, into slender branches, each tipped with a rosy-rayed head of flowers. Its season of perfection is May and June, at which time there is nothing in the gardens that equals it in beauty; for it possesses the brilliancy of the Cape *Helichrysa*, without their stiffness and formality. It requires to be treated as a tender annual; yet too much heat seems to be particularly offensive to it. (*Bot. Reg.*, Sept.)

CXC. *Cinchon*àceæ.

638. GARDE'N*IA* 5285 flórida
flòre simplici *Hook.* single-flowered ■ ☐ fra 5 jn W E. Indies 1831? C l.p Bot. mag. 3349
Probably a species distinct from G. flórida. See *Bot. Mag.*, t. 3349.

This delightfully fragrant shrub flowered, in June, 1834, in the noble gardens of Wentworth House, near Rotherham, Yorkshire; where it was received from the East Indies, and is treated as a stove plant. It is a shrub with numerous stout woody branches; leaves oval or obovate; flowers large, very fragrant; corolla pure white, soon turning yellow. (*Bot. Mag.*, Sept.)

648. MORI'NDA. [Bot. mag. 3351
jasminöìdes *Cun.* Jasmine-like § ⊔ cu 6? ap Pa.buff Port Jackson 1823? C l.p
In affinity near to M. parvifòlia *Dec.* Cun.

A twining half-shrubby species; rare in shaded brushes of the colony of Port Jackson, where it was detected by Mr. Allan Cunningham, bearing its orange-coloured berries, in March, 1821; by whom it was introduced to the Kew collection, whence the specimen figured had been derived. In habit, it resembles a *Jasmìnum*. (*Bot. Mag.*, Sept.)

CC. P*olemoniàceæ*.

499. GI'LI*A*.
trícolor *Benth.* three-coloured-*corollaed* ○ or 1 jl.s Li.P.O California 1833. S co Bot. reg. 1704

Its foliage much resembles that of G. capitàta; but its flowers are very much longer, and are disposed, not into globose heads, but into large and rather dense panicles at the extremity of the peduncles; which are shorter than those in G. capitàta, and very numerous. The deep orange of the centre of the corolla, and the light purple or white of the margin, and a circle of deep purple which separates these, display each other to great advantage. G. trícolor "is quite hardy, and will grow in any kind of soil. The time of flowering is from July to September; but it may be retarded or advanced by a little management. Nothing can well be prettier than this is, when thickly filling a bed a few feet in length and breadth." (*Bot. Reg.*, Sept.)

MONOCOTYLEDONOUS PLANTS.

CCXXXVIII. *Amaryllí*deæ.

979. ALSTRŒME'R*IA*.
aùrea *Grah.* golden-*perianthed* ♣ △| or 1½ jn Go.spot Chiloe 1831. D l.p Bot. mag. 3350
In habit near A. pulchélla, but smaller. (*Graham.*) It appears to be the A. aùrea *Hort.*, Gard.

Mag. IX. 490. The A. aurantìaca *D. Don*, Gard. Mag. IX. 622.; and the A. versícolor *R. & P.*, Gard. Mag. X. 71. If all these be but one, A. versícolor *R. & P.* is the earliest name, and, consequently, that to be preferred.

Derived from Mr. Low of the Clapton Nursery; to whom it was imported, from Chiloe, by Mr. Anderson. In habit it approaches A. pulchélla; but probably will always be a much smaller plant. Stems 1½ ft. high. Perianth orange-coloured: segments spreading; the lower and the three outer of a nearly uniform colour, occasionally with one or two deep orange-coloured streaks; the two others more yellow below the apex, and having many such streaks down to their yellow nectariferous bases. (*Bot. Mag.*, Sept.)

CCXL. *Orchídeæ.* Dr. Lindley and Mr. Allan Cunningham (whom he quotes) have given, in the *Botanical Register* for Sept., t. 1699., some suggestions incentive to the more successful cultivation of such exotic species of Orchídeæ, whether epiphytal or otherwise, as require the stove and green-house in Britain. The spirit of the remarks is, that various species, even in some instances species of the same genus, differ so much in their constitution and native habits, that they will not thrive equally under one common treatment; and that, consequently, a knowledge of the constitution and native habits of any species, and the causing of the artificial conditions to be as identical as possible with the native ones, are necessary to the successful cultivation of it.

We quote the given instances of anomalies: — Dendròbium speciòsum languishes in situations where the stanhopeas are in their greatest splendour; and the Chinese bletias almost perish by the side of Eulòphia and Zygopétalum. This arises from the great difference in their respective constitutions, which are each adapted to distinct conditions of life. . . . In the genus Oncídium itself, where almost all the species are of tropical habits, O. nubígenum is only found on the cool mountains of Peru, at the height of 14,000 ft.; it will, therefore, require a treatment altogether distinct from that of the mass of the genus. Dendròbium monilifórme and catenàtum, again, occur only in Japan, as far north as 37° or 38°, or the parallel of Lisbon, and are periodically subject to a very low temperature. In New South Wales there are two or three species, which grow on trees or rocks, whose natural constitution should suggest to English cultivators of them a mode of treatment different from that uniformly adopted for epiphytes generally in our stoves; namely, that in which high temperature and considerable humidity are employed. Dendròbium æ'mulum *Br.*, Cymbídium caniculàtum *Br.*, Dendròbium undulàtum *Br.*, are three instances. The first is uniformly found upon the rugged trunk of Eucalýptus resinífera, or iron-bark tree, in the open very dry forest grounds of the older colony at Port Jackson. The second has been observed beyond the tropic, both at Moreton Bay and still farther southward at Hunter's River, growing upon the principal limbs of several of the Eucalýpti in the dry open shadeless forest. The third has been found upon barren hills, naturally clear of timber; upon the banks of the Brisbane River at Moreton Bay, where the plant forms tufts on bare rocks exposed to the full heat of the sun, which, during nine months of the year, is very considerable upon that part of the coast. Two additional instances given are, Gúnn*ia* austràlis and Eárina mucronàta. G. austràlis grows upon the branches of shrubs in Emu Bay, in Van Diemen's Land, in about 41° s. lat. and 146° E. long. E. mucronàta occurs as far to the northward as 35° s. lat., in humid forests, at the Bay of Islands, in New Zealand; and exists, also, in abundance, in the very (permanently) damp woods which clothe the shores of Dusky Bay, lat. 45° 45′ s., on the western side of the larger or middle island of New Zealand. Considering the low rate of temperature which prevails in the southern hemisphere, as compared with the northern in corresponding latitudes, the station of E. mucronàta is not naturally different from the damper parts of the south-west coast of Ireland.

In relation to the subject of these remarks, we remember noticing, in p. 280., that Mr. Knight was, in May last, having a new house built for the culture of *Orchídeæ*. This is now completed; and supplies, we have been told, in four distinct compartments, a heated atmosphere and a cold one, a light one and a shaded one.

2481. *O'*RCHIS.
22484*a* foliòsa *Sol.* leafy-*spiked* ♃ △| or 1 my P Canary I. 1829? D p.s.moss Bot. reg. 1701

A fine species of *O'*rchis, native of woods and copses in Madeira; very much like the European *O.* latifòlia, from which it differs in being larger in all its parts, &c. The specimen figured was supplied by Messrs. Young and Penny, nurserymen, Milford, near Godalming, Surrey; in whose collection, so rich in Canary plants, the species has been some time cultivated; and with whom it succeeds extremely well, either in well-drained pots, or a turf pit, in a soil composed of the turfy portions of heath mould, with a mixture of moss and sand. (*Bot. Reg.*, Sept.)

2540. ONCI'DIUM. [Bot. reg. 1699
22693*a* ampliàtum *Lindl.* broad-*lipped* £ ⍍ or 2 mr Y Central America 1832? D p.r.w

In its pseudo-bulb and leaf like O. papílio; but very distinct in its flowers, and the disposition of them. These are rather small, very numerous, and disposed in clusters along the branches of an upright panicle: the sepals are yellow, with the labellum white at the back. The figure is derived from a plant possessed by R. Harrison, Esq. (*Bot. Reg.*, Sept.)

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

Action of Tannin, and some other Substances, on the Roots of Plants. By M. Payen.—It has been repeatedly stated that trees soon die when the roots come into contact with the remains of the roots of oak trees cut down near them. This was supposed to be owing to the action of the tannin in the oak roots. M. Payen, after making a number of experiments on the subject, arrived at the following conclusions:—1st, Tannin, even in small quantity, acts deleteriously on the roots of certain plants: 2dly, Acids in small proportions are hurtful to germination: 3dly, Alkalies in small quantity are favourable to the progress of vegetation: 4thly, The neutralisation of the acidity developed during germination hastens its progress, and favours the ulterior developement of the plant. These experiments account for one of the useful effects of lime, or vegetable ashes, and of calcareous marl; and also for the unfavourable influence of alkalies used in too great quantity, or unequally distributed. — (*Journal de Chimie Médicale*, April, 1834, as quoted in the *Lond. and Edin. Phil. Mag.* for August, 1834.)

Art. II. *Foreign Notices.*

INDIA.

A Plant-house for excluding Heat and growing British Plants.—Mr. G. Porter, lately returned from Penang, informs us that the Marchioness of Hastings, when resident in Calcutta as the wife of the Governor, had an immense conservatory built, for the purpose of growing British plants and trees; the intention being to shut out the heat. Mr. Porter mentioned to the marchioness, that, instead of shutting out the heat, it would rather increase it; and, in consequence of experiencing this to be the case, the house, after costing an enormous sum, was applied to contain a few common articles that heat could not injure. After similar instances of extravagance and folly, it is not greatly to be wondered at that the East India Company have in a great measure ceased to patronise botanic gardens.

A Botanic Garden in the Island of Penang was commenced in 1822 by Mr. George Porter, under the patronage of the then governor, Phillips. It was managed by Mr. Porter till 1828, when it was destroyed. Mr. Porter, when attached to the Calcutta Botanic Garden, prepared many specimens of plants for the herbarium of that establishment; and subsequently, as Dr. Wallich informs us, in a letter dated March 24. 1834, sent home vast collections both of growing and preserved plants from that rich island.

Art. III. *Domestic Notices.*

ENGLAND.

The Metropolitan Society of Florists and Amateurs had their grand show of georginas, roses, flowers, flowering plants, &c., at the Surrey Zoological Gardens, on August 13. and 14. The assemblage of company was most numerous, not less than 10,000 or 12,000 persons, it is stated in the newspaper reports, having entered the gardens in the course of the first day. The show of flowers was more than usually magnificent. Silver cups, and volumes on the science of horticulture, were the prizes awarded to the successful candidates by whom the best flowers had been reared. The names of the nurserymen to whom the cups were adjudged were: — Messrs. Chandler, Widnall, Harding, and Wilmore, whose georginas were preeminent in magnificence and splendour of colour. Mr. Brown was also the winner of a silver cup; and, among the amateurs, Messrs. Shepherd, Crowder, Lee, Alexander, and Salter obtained prizes. The prizes for the best pelargoniums were given to Mr. Hill and Mr. Gains; and Mr. Hopwood, Mr. Rivers, and Mr. Redding were particularly successful in obtaining the prizes for collections of cut flowers, and hot-house and green-house plants. There were many other florists and amateurs to whom prizes were distributed, but the above were the principal winners; and, indeed, so nearly equal were the merits of many of the competitors, that the judges had considerable difficulty in making their award. The animals in the gardens were in the highest condition; and were, of course, second only to the flowers in attracting the curiosity of the company. The rhinoceros was surrounded with a crowd of visiters of all ages; and the monkeys, parrots, elephants, &c., also came in for their share of attention. The very greatest praise is due to Mr. Cross, the principal proprietor of this establishment; who not only gave the use of his grounds, for two days, gratis, but, as we were informed, was also at the sole expense of the numerous tents and the band of music; and, besides, subscribed 50*l.* to the Society.

Seeds received from Dr. Wallich of the Calcutta Botanic Garden. — Two cones of the Cèdrus *Deodàra*, from Kamoon. These abound in seeds, every one of which seems dead: small blisters, filled with oil, appear under the coats of most of them; and the embryo, on opening the seed, is found of a light brown colour, and dead. One of the cones we have retained entire as a specimen. A follicle of Stercùlia alàta *Roxb.*, containing seeds in their natural position. This is very interesting even if viewed only as a carpological specimen. The follicle is orbicularly pear-shaped, about 4 in. long and about as much across; somewhat compressed, with walls half an inch thick; the seeds within are large, and rayedly disposed. Dr. Wallich remarks, that "it is very many years since this fruit ripened in this garden: it occurred during my charge, and only one individual was produced. Last year, one tree bore fifty or sixty follicles, all of which ripened. The tree is a very stately one." Five vials, occupied by seeds, and bearing labels thus inscribed: — 1. Limònia, Kamoon, Feb. 1834; 2. An Umbellífera, a Labiàta, two Synantherèæ [Compósitæ], and a *Búxus* from the foot of the Himalaya in Kamoon, Feb. 1834; 3. *Ròsa*, *Búxus*, Hullyato (a Synantherèa), and a *Fumariàcea* from the foot of the Himalaya, Jan. 1834; 4. A *Spiræ'a*, *Hippóphae* conférta, and Deodar from the foot of the Himalaya in Kamoon, Feb. 1834; 5. *Saussùrea* gossypíphora *Dan* [? *Donn*], *Cárduus* obvallàtus *Wall.*, *Hippóphae* conférta *Wall.*, *Ròsa* sp., from the foot of the Himalaya, Jan. 1834. There are, besides, seeds in papers of the following species of plants: — *Artemísia* lactiflòra *Wall.*; Bauhínia anguìna, brachycárpa; Beaumóntia grandiflòra; Convólvulus sp. from Burma, sp. from Neelgherry, lácteus *Wall.*; Clerodéndrum nùtans, *Dólichos* speciòsus, Elodèa pulchélla, Helícteres púlchra *Wall.*, *Hibíscus* violàceus. Numerous globular capsules, of a soft texture externally, within woody, and containing several small seeds, all of these of some one species of plant, have been introduced into the box as packing, seemingly, as there is not any mention of them. We shall distribute the seeds among the most enthusiastic of the nurserymen and botanic gardeners.

Tropical Fruit Trees imported for Lord Powis. — Mr. George Porter, originally of the Calcutta Botanic Garden, and, for the last thirteen years, a resident in the Island of Penang, has brought home, from Dr. Wallich, six mango trees of as many sorts, two Japan guavas, and two nutmeg trees, all in a healthy state, for the nobleman above mentioned; a zealous horticultural amateur, who has the merit of having been the first to fruit the mango in England.

Cones, from near the Gulf of Bothnia, of the Pine of Sweden. — Extract from a letter sent to J. B. Scott, Esq., Bungay, Suffolk, by J. Musgrave, Esq., of the County of Waterford; along with a bag of cones of the real Swedish pine, presented by the former of the two gentlemen to the Suffolk Botanic Garden, Bury St. Edmunds: — "These cones are from the *Pìnus* sylvéstris, the original Scotch pine; and were sent to me from Sundsval, on the Gulf of Bothnia, where I saw some of the best forests in Sweden. The town is celebrated for the excellence of the red deals exported from it; and they are from this *Pìnus sylvéstris*. The *Pìnus A'bies* [now *A'bies excélsa*], or spruce fir, produces the white deals, which are of an inferior quality. The tar is produced from the roots of both species, but principally from those of the *Pìnus sylvéstris*. The seeds are to be sown in or about March, in a light sandy soil; and must be carefully protected from the birds by nets, until the seeds, which come up on the top of the plants, have dropped off; otherwise the birds, in picking the seeds, pull up the young trees. The seeds are to be covered with sand or light earth, merely thick enough to prevent them from being blown away by the wind. The cones, when placed in the sun, or exposed to a heat not greater than that of a place exposed to the sun in summer, will open; and, by shaking them in a cloth, the seeds will drop out. Every seed has a small wing attached to it, which, by rubbing them between the hands, will come off. This is a beautiful provision of nature, made for dispersing the seeds; and, as the best cones grow near the summits of the highest trees, the seeds are thus carried to great distances." — *H. Turner. Botanic Garden, Bury St. Edmunds, Aug.* 1834. [We feel obliged to Mr. Hodson, the superintendent of this garden, and to Mr. Turner, the curator, for sending us these cones for distribution.]

A Cockscomb was sent to us, on Aug. 6., by Mr. John Pattison, gardener to Jos. Trueman, Esq., Grosvenor House, Walthamstow, Essex, which measured in height, from the pot to the surface of the flower, 2 ft. 4 in.; one of the leaves measured 1 ft. in length, and 5 in. across the broadest part; and the flower 1 ft. 11 in. in length, and 15 in. in breadth. Altogether, this was an erect, symmetrical, and very handsome plant. We placed it under a glazed veranda on a western aspect; and it is now (Sept. 1.) in as great beauty as the day it arrived. Mr. Pattison has promised to send us a paper on his mode of cultivation.

The Galande Peach. — As I have not observed, in horticultural works, the Galande peach taken notice of in the way its great merits deserve (whether as to size, flavour, or appearance), I have sent a few specimens, taken indiscriminately from the tree, that you may (if you agree with me as to its qualities) specify it as one of our very best varieties of this excellent fruit: a point well worth knowing to those about to plant a peach wall. It is not mentioned in the summary of peaches in the *Pomological Magazine* (vii. 114.), unless they suppose it synonymous with the Bellegarde; from which, I think, it slightly differs. I remember this struck me two months ago, on observing some fine specimens of the latter in the peach-house here. — *John Thomas Brooks. Flitwick House, Aug.* 21. 1834.

The peaches received were most excellent, and more than justify the praise of our correspondent. They measured, on an average, about 10 in. round one way, and 8½ in. the other. We sent one of them to Mr. Thompson, at the Horticultural Society's Garden, who returned us the following note: —

" The peach is the Bellegarde, to which the Galande is a synonyme. It is one of the very best sorts of peaches, and ripens in the middle season. It is also not apt to mildew; which is a great recommendation. — *Robt. Thompson. Horticultural Society's Garden, Aug.* 25. 1834."

Size of a White Eagle Gooseberry grown by Mr. Soltas, near Lancaster. Length 3½ in., including the stalk and the remains of the blossom; length of the berry 2¼ in. Breadth across 1⅝ in. Weight 19 dwts. 11 grs. — *M. Saul. Sulyard Street, Lancaster, July* 31. 1834.

A Cucumber, 21 in. long, was exhibited by Mr. Marshall, in Ipswich market, on May 31.; being grown by him, upon the plan recommended by Mr. Allen, in the short space of eight days, without under-heat or lining. (*The Bury and Norwich Post and East Anglian*, June 4. 1834.

A Cabbage, weighing 38 lbs. without the stalk, was cut, in the first week in August, from the garden of the Rev. C. Mules of Muddiford, near Barnstaple, Devon. (*Devon Advertiser*, Aug. 22.)

Unseasonable Inflorescence, &c. — Owing to the early spring, the warm summer, and the late abundant rains, many trees and plants are now in blossom for the second time; and trees in our own garden at Bayswater, such as Salisbùria, *Diospy̆rus*, *Sophòra*, &c., have made midsummer shoots, which do not generally do so. We have the *Spiræ*'a béllа a second time in flower. The *Caprifòlium* sinénse is also covered with profuse blossoms a second time; or rather, it has never been completely out of blossom since May. The same may be said of the Wistària *Consequàna*, in the garden of the Horticultural Society. The following instances are from the newspapers: — There is, in the nursery-garden of Mr. Jeffery, St. Giles's, Oxford, a standard pear tree most beautifully in blossom. A gentleman, residing at Cooppersale, Essex, has in his garden a Hawthornden with fruit ready to gather, and, at the same time, a profusion of beautiful blossoms. In the garden of Mr. Slater, Newark, there is an apple tree full of beautiful bloom; it is also loaded with fine large apples, bloom and ripe fruit on one branch. There is also, in the same garden, a plum tree in second bloom. There is now in Silver Street, Bedford, an apple tree bearing a second crop of fruit, which promises well; the first gathering was a good one. A gentleman on the borders of Herts has a cucumber tree [the Hercules club gourd, *Cucúrbita* Lagenària var. clavifórmis *Lin.*, Lagenària vulgàris var. clavàta *Ser.* (see Vol. II. fig. 29.)] growing in his garden, the fruit from the vine hanging down, some of which measured 26 in. in length. In the garden of Mr. Martin, at Buckingham, is an apple tree in quite as full and beautiful blossom as trees usually are in the spring, although it has several fine apples on it. Many of the new blooms are set. (*Weekly Dispatch*, Aug. 25. 1834.) On Aug. 22., in the garden of Mr. John Bennett of Helston, a second crop of strawberries is ripe, from plants which bore abundantly at their proper season. This second crop is as large and as well flavoured as the first.

New Varieties of Grain. — The Chevalier barley, mentioned p. 508., appears to have been cultivated near Liskeard, and to have produced extraordinary crops of a very superior quality. The Egyptian wheat (*Tríticum* compósitum), known in Mark Lane as Robinson's Fancy, of which a fine specimen was lately sent to us, has produced larger crops than usual this season.

SCOTLAND.

The Caledonian Horticultural Society intended so to have arranged their annual dinner, as that the competition fruit might have been partaken of by the members of the British Association, who are to meet in Edinburgh on Sept. 7. On mature consideration, however, they found that they could not deviate from the day fixed in their prize list, which had been widely circulated six months before. This day is the 4th of September, and if any of the learned strangers should happen to be in Edinburgh by that time, there is every reason to believe that they will be invited to be present at the Society's dinner. (*Edinburgh Advertiser*, Aug. 22.)

Dalkeith, Aug. 20. — All the gardeners in the neighbourhood of Edinburgh are exerting themselves to make a fine display by the time the British Association for the Advancement of Science arrive in Edinburgh, as it is expected that they will visit most of the gardens in the neighbourhood. The park [that of Dalkeith] never looked better, but I am sorry that I cannot say quite so much for some parts of the gardens. A garden is no sooner full grown and in high order than it begins to decay, and get into confusion. The gardener does not always see this, because the changes come upon him so gradually, that he is not aware of their extent; and he is less aware of this than ever, when his place happens to be a celebrated one. I was in Edinburgh last week, and I never saw the botanic garden looking better. Many shrubs have flowered there this season, better than they ever did before, doubtless owing to the warmth of last summer, which ripened the wood, and that of the present season, which has been so favourable for expanding the flowers. I never saw the Althæa frutex look so well as it does in the nurseries this summer.

You recollect the immense silver firs at Woodhouselee. It is seven years since I was there, but my son informs me that they are still in vigour. It is now a good many years since I sent you my first communication [see I. 29.], soon after which I went to a place in the north, from which I have just returned. — *James Simson.*

IRELAND.

Dublin, Aug. 12. — All foreboding of failure in the potato crop in this country is now at an end. I never remember such sultry weather as we have at present, and I have never before observed the air in such an extreme state of dryness as it was in Dublin this day. You have heard, I suppose, that our college has invited the British Association for the Advancement of Science to hold their next meeting in Dublin. I hope they may accept it. We are on the advance in those matters here. You have heard of the appointment of Mr. Nevin as curator to the Dublin Society's Botanic Garden. He is a clever fellow, and is doing wonders there. The garden wears a new face already, and he has only been there about three months. — *R.*

Art. IV. *Retrospective Criticism.*

Corrections.—In p. 326., for "Portsmouth rail-road" read "Southampton rail-road;" and in p. 329., for "16 ft. in diameter" read "16 ft. in circumference." In pages 296. and 352., for "Clawance," read "Clowance." In fig. 70. p. 374., trees are put in the wall borders inside, which is a mistake of the engraver's.

Depressed State of the Nursery Business. (VIII. 129. 134.) — On looking over some of the back volumes of your Gardener's Magazine, I happened to cast my eye upon your remarks, relative to the depressed state of the nursery business; and, as this trade still remains in nearly the same condition, it will, perhaps, not be inopportune, if I now make a few observations on the causes which I think have produced this result. I by no means intend to impugn the justice of your conclusions, neither do I question but that the causes which you have assigned have, more or less, affected this business; but you have omitted to advert to one or two circumstances, which, in my opinion, have had a greater influence on this trade, than any of the reasons stated by you.

Some time previous to the institution of the London Horticultural Society, a long and expensive war, with other circumstances, had caused a very great expenditure; trade and commerce had increased in a wonderful degree; in consequence of which rapid fortunes were made, and a taste for the luxuries and the elegancies of life extended in a surprising manner. In this state of things, it was not to be supposed that the pleasure to be derived from the study of botany, and the cultivation of plants, should be overlooked, and hence arose a great demand for plants, and an anxious desire, on the part of a vast number of individuals, to procure new ones from abroad. This in time produced the London Horticultural Society, which, I believe, was originally instituted principally for the purpose of procuring new plants from foreign countries, and was commenced in a very humble way. I apprehend it was always in the contemplation of the Society to induce individuals, by bestowing some mark of distinction on them, to exert themselves in producing the finest specimens of fruits, &c., or in raising new varieties. If the Society had confined their views to these objects, they would have done all that was necessary for fostering and extending the love of horticulture; but they were not contented with this: they considered it necessary to extend their operations, by taking a large place at Chiswick; and, for the purpose of defraying their increased expenses, converted a society, formed originally for the advancement of horticulture, into a trading company, for the sale of horticultural productions; for this it manifestly has been for some years. To this cause is mainly owing the present distressed state of the nursery business. The subscribers to this Society consider themselves entitled to procure plants, &c., from their garden, consequently they discontinue, generally speaking, to apply to the nurserymen; and, although I am aware that it must be impossible for the garden to supply plants to its members in any very extensive degree, still, as the opinion has gone abroad that they can be procured from this source, many wait patiently for their turn, rather than purchase from the trade: this notion also extends to the friends of the members, so that it is quite impossible to calculate the injury which is inflicted upon the industrious nurseryman. It would be in vain to expect the Society now to discontinue the practice of distributing plants, &c., to the members; their debts and difficulties render such a measure hopeless, because I am convinced it would cause a very great diminution in their annual receipts; but, whenever such a measure is practicable, its effect will be striking. In such a case, I would strongly recommend them to reduce the subscription to a much more moderate sum, and to confine their objects to the collecting of as many varieties of plants, fruits, &c., as possible; and the encouraging of the cultivation and improvement of all horticultural productions, by bestowing some mark of distinction or reward whenever merited. This last end cannot be better attained than by having periodical exhibitions similar to those of last year.

It has been very generally believed that the Horticultural Society has been the means of extending the taste for plants, and that it has also greatly promoted the rapid improvements which have taken place, in the last few years, in our fruits and vegetables. This I am not wholly prepared to deny, although I firmly believe that, had the Society never existed, the taste for plants would have extended, and the improvement in our fruits, &c., have taken place to a very great extent, and that without inflicting injury upon any particular class.

Another cause of the badness of the nursery trade is, the practice, which very generally prevails, of noblemen and gentlemen selling their fruits, &c.; and also allowing their gardeners to propagate and sell plants, for the purpose, no doubt, of contributing towards the expense of their garden establishments. That noblemen should degrade themselves by sanctioning such a practice, is really extraordinary. Conceive a noble duke, or a royal one, if you please, sending his forced fruit and vegetables to Covent Garden Market. The aristocracy expect the people to respect them, and to consider them as something superior to the rest of the community; but, if they lower themselves by becoming traders, how is it possible for them to command respect? That the noble trader ever derives any benefit, in a pecuniary point of view, from such a system, I much question; but certain it is, that no money which they can gain will ever compensate them for the disgrace and contempt which it entails upon them from those whom they consider their inferiors. But, notwithstanding the little benefit which is conferred upon the aristocratic trader by the sale of his fruit, &c., it does most assuredly inflict great injury upon the nurserymen and market-gardeners, who depend upon the sale of their articles for their sustenance. To the above causes, together with those which you have pointed out, I am disposed to attribute the depressed state of the trade. It is frequently much easier to ascertain the source of an evil than to point out a remedy for it. In the present instance, I do confess, I see no immediate prospect of relief to the trade in question. Men will do what they please with their own; and, so long as human nature continues to be influenced by mere selfishness, I fear it is not to be expected that they will forego what they consider an advantage, purely for the sake of benefiting any trade whatever. The only thing, therefore, likely to produce a reaction is, the extension of the taste for plants and gardening. Floriculture is making rapid progress; and, instead of being confined almost exclusively to the humble in life, as was the case some few years back, the taste for florists' flowers has extended to many in the higher ranks. Let us hope, therefore, that, in a little time, the love of plants will become fashionable; and that a collection, at the seat of every nobleman, will form an indispensable appendage to the place. If the nobility would but turn their minds to the innocent, and, at the same time, rational, amusement of superintending the cultivation of their gardens, and enter into the spirit of the thing with the same enthusiasm as they do into many other less wise, and sometimes less justifiable, pursuits, how soon would they feel the benefit of the change! You have exerted yourself more, perhaps, than any other individual in promoting the interests of horticulture, and also for those employed in it: that your endeavours may be ultimately crowned with success, and that you may yet see a vast increase to the number of amateur gardeners, is the sincere wish of — *E.*

ART. V. *Covent Garden Market.*

	From			To		
	£	s.	d.	£	s.	d.
The Cabbage Tribe.						
Cabbage, White, per dozen -	0	0	6	0	0	9
Red - - -	0	1	6	0	2	6
Plants or Coleworts, per doz.	0	0	9	0	1	3
Broccoli, Green, per bunch -	0	0	6	0	0	0
Cape - - -	0	0	6	0	0	9
Legumes.						
Peas { per half sieve -	0	2	0	0	2	6
Peas { per sieve - -	0	3	6	0	5	0
Kidneybeans, per half sieve	0	0	9	0	1	3
Tubers and Roots.						
Potatoes - { per ton -	2	10	0	3	10	0
Potatoes - { per cwt. -	0	2	6	0	3	6
Potatoes - { per bushel	0	1	6	0	2	0
Jerusalem Artichokes, per half sieve - - -	0	1	0	0	1	6
Turnips, White, per bunch	0	0	1	0	0	1½
Carrots, per bunch - -	0	0	3	0	0	6
Horn - - -	0	0	4	0	0	6
Red Beet, per dozen - -	0	1	6	0	2	0
Scorzonera, per bundle -	0	1	6	0	2	0
Salsify, per bunch - -	0	1	6	0	2	0
Horseradish, per bundle -	0	2	0	0	3	6
Radishes:						
Red, per dozen hands (24 to 30 each), per bunch -	0	0	6	0	0	9
White Turnip, per bunch	0	0	1	0	0	0
The Spinach Tribe.						
Spinach { per sieve - -	0	1	3	0	1	6
Spinach { per half sieve -	0	1	0	0	0	0
New Zealand, per half sieve	0	2	6	0	0	0
Sorrel, per half sieve - -	0	0	9	0	1	0
The Onion Tribe.						
Onions, Old, per bushel -	0	2	6	0	3	0
For pickling, per half sieve	0	3	0	0	4	0
When green (Ciboules), per bunch - - -	0	0	3	0	0	0
Spanish, per dozen -	0	3	0	0	6	0
Leeks, per dozen bunches -	0	1	0	0	1	6
Garlic, per pound - -	0	0	6	0	0	8
Shallots, per pound - -	0	0	8	0	0	10
Asparaginous Plants, Salads, &c.						
Lettuce, per score:						
Cos - - -	0	0	9	0	1	6
Cabbage - - -	0	0	6	0	0	9
Endive, per score - -	0	1	0	0	1	6
Celery, new, per bundle (12 to 15) - - -	0	0	6	0	1	0
Small Salads, per punnet -	0	0	2	0	0	3
Pot and Sweet Herbs.						
Parsley, per half sieve -	0	1	6	0	2	0
Tarragon, per dozen bunches	0	4	0	0	6	0
Fennel, per dozen bunches -	0	1	6	0	2	0
Thyme, per dozen bunches	0	2	0	0	0	0
Sage, per dozen bunches -	0	2	0	0	0	0
Mint, per dozen bunches -	0	1	6	0	0	0
Peppermint, per dozen bunches	0	1	0	0	0	0
Marjoram, per dozen bunches	0	1	0	0	0	0
Savory, per dozen bunches -	0	0	10	0	1	0
Basil, per dozen bunches -	0	2	0	0	0	0
Rosemary, per dozen bunches	0	6	0	0	0	0
Tansy, per dozen bunches -	0	0	10	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Vegetable Marrow, per dozen	0	0	6	0	0	9
Gourds, per dozen - -	0	0	9	0	1	0
Tomatoes, per half sieve -	0	1	6	0	2	0
Capsicums, per hundred:						
Green - - -	0	1	0	0	0	0
Ripe, Large - -	0	5	0	0	6	0
Chilies - - -	0	1	0	0	1	6
Edible Fungi and Fuci.						
Mushrooms, per pottle -	0	1	0	0	1	6
Morels, per pound - -	1	4	0	0	0	0
Truffles, English, per pound	0	3	6	0	0	0
Foreign - - -	0	14	0	0	16	0
Fruits.						
Apples, Dessert, per bushel:						
Ribston Pippins - -	0	4	0	0	5	0
Downtons - -	0	3	0	0	0	0
Russets - - -	0	3	0	0	0	0
Gough Pippins - -	0	2	0	0	0	0
Baking, per bushel - -	0	1	6	0	2	6
Pears, Dessert, per half sieve	0	6	0	0	10	0
Bergamot - - -	0	3	0	0	5	0
Swan's Eggs - -	0	4	6	0	0	0
Chaumontels - -	0	5	0	0	0	0
Baking, per half sieve -	0	2	6	0	3	0
Peaches, per dozen - -	0	4	0	0	0	0
Almonds, per peck - -	0	7	0	0	0	0
Damsons, per sieve - -	0	14	0	0	0	0
Mulberries, per gallon (two pottles) - - -	0	6	0	0	8	0
Blackberries, per half sieve	0	1	6	0	2	6
Berberries, per half sieve -	0	4	0	0	5	0
Elderberries, per bushel -	0	4	0	0	5	0
Walnuts - - -	0	4	6	0	7	0
Filberts, English, per 100 lbs.	4	10	0	5	0	0
Hazel Nuts, per peck -	0	2	0	0	0	0
Pine-apples, per pound -	0	4	0	0	8	0
Grapes, per pound:						
Hot-house - -	0	1	0	0	2	0
From the open wall -	0	0	2	0	0	6
For Wine, per 112 pounds	0	18	0	1	4	0
Melons, each - -	0	2	0	0	5	0
Cucumbers, Pickling { per hundred -	0	0	6	0	0	9
Cucumbers, Pickling { per thousand	0	3	0	0	4	0
Oranges { per dozen - -	0	2	0	0	4	0
Oranges { per hundred -	0	12	0	1	4	0
Lemons { per dozen - -	0	0	9	0	2	0
Lemons { per hundred -	0	4	0	0	12	0
Dates, per pound - -	0	1	0	0	2	0
Sweet Almonds, per pound	0	2	0	0	3	0
Brazil Nuts, per bushel -	0	16	0	0	0	0
Spanish Nuts, per peck -	0	4	0	0	0	0
New - - -	0	5	0	0	0	0
Barcelona Nuts, per peck -	0	5	0	0	0	0
Eggs of Silkworms, per paper	0	0	6	0	0	0

Observations.—The supplies to the market are continued in abundance. The demand being limited, the prices are correspondingly very moderate. The weather having been particularly favourable to the growth of vegetable productions during the last month, we may confidently anticipate a full supply through the months of October, November, and up to Christmas. Should the weather still prove favourable, there can be little doubt of plenty being furnished throughout the whole of the winter. The prevalence of wet during the month of August has contributed materially to improve the crop of potatoes, which are now supplied from the home districts in tolerable abundance. Some few cargoes have already arrived from Jersey, which have not yet been disposed of, although offered at the very low price of 50*s.* the ton. The crops of green vegetables, such as turnips, colewort, cabbages, parsneps, and carrot, are now coming to hand in the utmost profusion, at a ruinous loss to the growers. Onions are in great plenty; the recent dry weather being favourable to ripen them, they are now fit for housing for winter use. French beans are still supplied in great plenty, and will be no doubt for some time, should early frosts not intervene. Broccolies of the early varieties are already coming in, so that the market offers at this season more than its usual abundance. Of walnuts we continue to receive large supplies from Holland and the Netherlands, our own crop being very short: they are in demand at remunerating prices. Although we have a most excellent crop of grapes, supplies from Holland of the black Hamburgh variety are imported: with some peas, &c., from Jersey. Our crop of apples is most abundant. The market continues to be furnished most plentifully, the prices of the common varieties hardly paying the expense of transport from the more distant counties, from which we are usually furnished at this season. Filberts, in consequence of the crop being nearly exhausted, have risen considerably in price, and are still in demand. Considerable quantities of melons from Holland have been received; prices very moderate: a few late peaches and some pears are also to be observed, but the crop of the latter is so small that but few can be expected.—*G. C. Sept.* 20. 1834.

ART. VI. *London Horticultural Society and Garden.*

SEPT. 2.—*Exhibited.* A seedling Fúchsia, originated between F. globòsa and F. virgàta, from Mr. H. Silverlock. Téton de Venus peaches and nectarines from —— Pitcairn, Esq., Twickenham Common. Chroólepus Iólithus, from the Right Hon. Sir Augustus Foster, Bart. Apples of the kinds, Manx codlin, Keswick codlin, scarlet pearmain, and yellow Ingestrie, from Mr. J. Kirke. Flowers of twenty-eight varieties of georginas from Messrs. Chandler. A double sunflower from Mr. Jacob Hall, gardener to Lord Wharncliffe, Broom House, Fulham.

Also, from the Society's Garden, flowering specimens of Fúchsia sp. from Port Famine, Thryállis brachýstachys, Gesnèria rùtila, Silène laciniàta, Helichrýsum bracteàtum álbum, Solànum laciniàtum; Escallònia rùbra, montevidénsis; Chirònia trinérvis, China asters, China roses, georginas, seedling georginas; late admirable peaches. Lupìnus álbifrons, ornàtus; Sálvia involucràta, Hibíscus africànus, Màdia élegans, &c. Pears: Hessel, this is a very abundant bearer; green pear of Yair, of the few Scotch pears that deserve cultivation this is one; grise bonne. Apples: old English codlin, Dutch codlin; Gravenstein, the fruit of this kind have not grown so fine as usual, probably owing to the dry weather; crimson queening, spice, Kerry pippin.

The Show at the Horticultural Society's Gardens, on Sept. 13., was as well attended as could be expected, considering that the fashionable world at this season are always out of town. The display of georginas was most splendid; but it was greatly injured in effect by the want of classification of the kinds. Only two attempts were made at classification; and though confessedly done in great haste, yet the result to us was very satisfactory. One of these attempts was made by Mr. Veitch of Exeter, but the name of the party who made the other we could not learn. Had reading gardeners been the principal exhibitors of these georginas, we are persuaded that what we have before said on the subject of classification would not have been lost on them; but practical men, we shall be told, are not to be taught their business by books, or bookmakers. So much the worse for them. Among the plants exhibited, was a very fine specimen of Anigozánthos rùfa, from the Swan River, from seed sent to Robert Mangles, Esq., by Sir James Stirling, sown in August, 1833. It is a half-hardy hæmodoraceous plant, with leaves like an iris, about 2 ft. high; a free grower and flowerer, and likely to ripen abundance of seeds. Its tubular corollas are of a dark crimson colour, running at the base into a deep velvet-like bluish green, which gives the whole a parrot-like aspect, and harmonisies well with the trees and paroquets of Australia. A beautiful silver-leaved Quércus *I'*lex was exhibited by Mr. Veitch. A dried specimen of a new hardy climber, Physiánthus undulàtus, which flowers from August to winter, was shown us, and, when plants can be obtained in the nurseries, it will probably be found as great an acquisition as Lophospérmum, or Calámpelis. Among the fine specimens of old plants were Oncídium papílio (of which we recently received a drawing and dried specimen from Dr. Hamilton at Plymouth), a very handsome Brugmáns*ia* suavèolens, numerous fuschias, &c. Among the fruits were very fine melons, pine-apples and grapes. Among the articles shown incidentally was an improved orange tub of slate, which we shall hereafter figure and describe. The following prizes were awarded:—

The gold Banksian medal: 1. To Mr. C. Dowding, gardener to Lady Clarke, for miscellaneous fruit; 2. To Mr. Redding, gardener to Mrs. Marryat, F.H.S., for miscellaneous plants; 3. To Mr. C. Brown, F.H.S., for a collection of 100 georginas; 4. To Mr. Glenny, F.H.S., for a collection of 100 georginas.

The large silver medal: 1. To Mr. Atlee, gardener to T. Farmer, Esq., F.H.S., for grapes; 2. To Mr. R. Buck of Blackheath, F.H.S., for Muscat grapes; 3. To Mr. Fletcher, gardener to George Smith, Esq., for a queen pine; 4. To Mr. William Bridden, gardener to Mrs. Myddelton Biddulph, for a New Providence pine; 5. To Mr. J. Loudon, gardener to Samuel Gurney, Esq., F.H.S., for green-fleshed melons; 6. To Mr. William Lindsay, gardener to the Duke of Devonshire, F.H.S., for Gansel's bergamot pears; 7. To Mr. Jarvis, of Turnham Green, for beurrée Diel pears; 8. To Mr. Joseph Kirke, F.H.S., for a collection of apples; 9. To Mr. Upright of Morden, for miscellaneous plants; 10. To Mr. George Mills, F.H.S., for miscellaneous plants; 11. To Messrs. Rollison of Tooting, for Epidéndron cuspidàtum; 12. To Mr. Stephen Hooker, F.H.S., for China and perpetual roses; 13. To Messrs. Rollison, for miscellaneous roses; 14. To Mr. Widnall of Cambridge, for a collection of 100 georginas; 15. To Mr. Gaines of Surrey Lane, Battersea, for a collection of 100 georginas; 16. To Mr. C. Brown of Slough, F.H.S., for a collection of 25 georginas; 17. To Mr. Widnall of Cambridge, for a collection of 25 georginas.

The silver Banksian medal: 1. To Mr. Clews, F.H.S., for black Hamburgh grapes; 2. To Mr. Spong, gardener to Robert Gordon, Esq. M.P. F.H.S., for melons; 3. To Mr. Jarvis of Turnham Green, for apples; 4. To Mr. Boone, gardener to S. Warner, Esq. F.H.S., for citrons; 5. To Mr. Cuthill, gardener to Lawrence Sullivan, Esq. F.H.S., for cucumbers; 6. To George Robins, Esq. F.H.S., for *Yúcca a*loïfòlia; 7. To Mr. Spence, gardener to R. Durant, Esq. F.H.S., for Brugmáns*ia* arbòrea; 8. To Mr. Mountjoy of Ealing, for heartsease; 9. To Mr. C. Brown of Slough, F.H.S., for miscellaneous heartsease; 10. To Mr. Rivers of Sawbridgeworth, for China asters; 11. To Mr. Brewer of Cambridge, for seedling georginas; 12. To Mr. Henderson, gardener to Captain Foster, F.H.S., for seedling georginas; 13. To Mr. Wilner of Sunbury, for 25 varieties of georgina; 14. To Mr. Molier of Fifield, Berks, for 25 varieties of georgina; 15. To Mr. Catleugh of Hans Street, Sloane Street, for a collection of 100 georgina pots.

THE
GARDENER'S MAGAZINE,
NOVEMBER, 1834.

ORIGINAL COMMUNICATIONS.

Art. I. *Observations made during a Horticultural Tour through the Eastern Part of the County of Fife.* By Mr. William Smith, Gardener to John Small, Esq., the Priory, St. Andrew's, Fifeshire.

Having recently made a horticultural journey round the eastern extremity of the county of Fife (or the East Nook, as it is commonly called), in company with a neighbouring gardener, we agreed that a detailed account of what came under our observation would not be unacceptable to you for insertion in your Magazine, and especially to your readers in this quarter, who are acquainted with the places at which we called. Through the great kindness of our employers, we were each supplied with a horse; and we may remark, that such liberal conduct on the part of masters cannot fail to gain the willing obedience, diligence, and gratitude of their servants in return. Leaving St. Andrew's in the morning, we proceeded along the coast on the Crail road: the country on each side is almost regularly studded with compact modern farm-steadings; the fields are well enclosed, either with stone walls or with thorn hedges. The farmers in this country generally prefer the former, as not harbouring birds, &c.; but stone walls, when combined with a great want of detached trees, and also of plantations, give to any country, however well cultivated, a bare and barren appearance. On approaching the residence of Mr. Glass of Smiddy Green, the country begins to assume a better appearance, both in stripes and masses of plantation. The mansion-house of Smiddy Green is beautifully situated on the top of a steep bank, covered with shrubs and trees; but, from the road, it has the appearance of being buried among them; and a judicious thinning is required to give the traveller, at least, a glimmering view of it. A little farther on commence the grounds of Lord Pitmilly, formerly a judge of the Court of Session. Walls, hedges, hedgerow trees, and plantations are here to be seen in great variety; and in the park are some very large beeches and other kinds of trees, as well as some small clumps, &c. Mr. Ingram, the gardener, showed us round the kitchen-garden; the surface of which is quite level, and is in the form of an oblong square. The hot-houses are placed rather beyond the centre (their proper place), and there is no central walk in front of them, which a large garden like this should by no means be without; and more particularly a garden of this form. The soil here is of a loamy nature, and well suited to apples, pears, &c. The trees are beautifully trained, chiefly in the horizontal form, and bear fine crops. Mr. Ingram disapproves of dwarf standards along the walk borders, and is substituting straight espaliers in their stead. On entering the hot-houses, we were rather surprised at Mr. Ingram's system of management, particularly as regarded thinning the bunches, which, we must say, is carried to an extent we never before witnessed. The Royal white sweetwater was certainly very large; but the Muscat, Hamburgh, Frontignac, &c., were not remarkable in size of berry, with the same treatment. In the peach house, the trees were in remarkably good order and good health, with a fine crop of fruit. This house is merely covered with glass in the summer, which is removed in winter, and is, in fact, nothing more than a protected wall, without fire heat: it contains room enough, however, for the management of the trees; and, although not a very pleasant object to the eye, answers all the purposes of a large peach house. On the east end of the vinery is a small neat green-house, lately built, which contains some good plants and tender annuals. On the outside of the garden is a range of cold melon pits, surrounded with a rockwork almost covered with the coarser kinds of creeping and rock plants. Mr. Ingram is very successful in raising seeds of the Prímula præ'nitens, which he attributes to his method of distributing the pollen and effecting the proper impregnation of the flowers, which is merely to blow occasionally on the flowers of the plants while they remain expanded.

Proceeding forward, we next arrived at the neat little village of Kingsbarns, which strongly reminded us of the appearance of an English village: the church with its spire and willow trees, the neat little schoolhouse, the alehouse, and the farmyards, all grouped pleasingly together; and the general neat and clean exterior of the houses, with the road leading through the centre, increased the illusion: in short, nothing was wanting, but the mansion of the lord of the manor, to perfect the resemblance of a true English village.

We next entered the grounds of Sir David Erskine, Bart., of Cambo. Having found Mr. Falconer, the gardener, at his house, which is at least a mile from the garden, we proceeded on in that direction. The fields here are well enclosed, and sheltered with narrow slips of plantation; and in each is a neat-shed, for the protection of the cattle in stormy weather. The grounds have a gentle declivity towards the sea; and in the park there are several undulations, and a few detached trees and groups, &c., with the carriage drive winding gracefully among them; though, in our opinion, it approaches too straight in front of the house. From our view of the house, it appeared to form the two sides of a square, with a semicircle in the centre. It has a fine lofty appearance, with the larger trees at a reasonable distance from it. Entering the garden by the north entrance, we at once perceived it to be a natural garden, that is, the surface of the ground in its natural form, with a small brook running through the centre, over which are several neat cast-iron bridges. In the hot-houses were fair crops of grapes; but in the black grapes there was a great deficiency of colouring, notwithstanding Mr. Falconer's giving strong fire and sun heat. This is a general complaint this season; and we, in the hot-houses under our own management, are not exempt from it. In another part of the garden is the peach house, without fire, with trees trained on the front sashes, with openings between, to admit light for those on the back wall. In this house were good crops of peaches and nectarines. Mr. Falconer has raised seven kinds of nectarines from seed, and has them all budded and bearing on one tree. We gave him a lecture for not bringing them into notice through the medium of the Horticultural Society of Edinburgh. Here are two fine ranges of melon pits, with covered-in linings, and surrounded by a rockwork. Mr. Falconer is very successful in the culture of early melons; but, as far as we could learn, his practice does not differ from that of others. The flower-garden is small, but neat, and contains some fine specimens of rare plants. The kitchen-garden produces all sorts of fruits and vegetables; but, for a country garden, our opinion is, that its best features are lost by such a monotony of shrubs. We very much object to shrubs, yea, even standard fruit trees, within the walls of a garden at all.

On leaving the beautiful grounds of Cambo, the country again begins to look bare, and especially towards the extreme point of land called the East Nook. We now pass the town of Crail, which we did not enter, but turned eastward along the north bank of the Forth. The country now assumes a fine appearance in the low grounds; but the hills in the distance are like Agronome's fine-dressed lady, wanting the head-dress; that is, not in unison with the country below.

Passing Kilrenny, we next come to Anstruther, an ancient-looking town, famous for being the scene of the famed ballad of Maggy Lauder. Passing through a most ruinous street, all in a confusion of repairing, we observed, on a new house, a most singular group of rams, goats, cows, and elephants, in various standing postures: —

> ——— " Some seem'd to muse,
> Some seem'd to dare, with feature stern."

These are all formed with shells in alto-relievo. The front of the house is also beautifully ornamented with large sea shells stuck close together, and has a fine effect. Various other figures are on the west side; and several curiously entwined crowns of rams' horns complete the whole. A little farther up the street is to be seen the following scene, painted from Burns's famous poem of Tam o' Shanter: —

> " As bees bizz out wi' angry fyke,
> When plundering herds assail their byke;
> As open pussie's mortal foes,
> When pop she starts before their nose;
> As eager runs the market crowd,
> When 'Catch the thief!' resounds aloud;
> *So Maggie runs; the witches follow,*
> Wi' mony an eldritch screech and hollo."

The next town is Pittenweem. The road passes on the north side, and we did not enter the town. In a straight line north of this is situated the estate of Grangemoor, the seat of the Hon. W. Keith Douglas. This place is at present undergoing extensive alterations and improvements. A new approach road, the porter's lodge, the gardener's house, and kitchen-garden, with part of the hot-houses and orchard, present a fine spectacle to the traveller coming from Pittenweem. On finding Mr. Weir, the gardener, who was very busily employed, he first showed us through the flower-garden, a very neat little spot, containing no commonplace plants, but planted wholly with those most lately acclimatised, georginas, &c. Attached to this is a small green-house, in which we observed some of the latest introduced tender plants. A few yards onward are the pinery and melon-ground. The pines were young, healthy, and plunged in bark; and the pits contained moderate crops of melons, &c. The colour of these pits was green, which we disliked, it being too much in unison with the surrounding scenery. We next entered the kitchen-garden, and at one glance could perceive that it was to our taste. Here were no " mixtie maxtie queer hotch potch," but straight walks, straight espaliers, few flowers, no shrubs, and not a single standard tree. The crops of fruit were excellent, and the keeping of the finest polish; in short, we may say that it was a perfect model for a country garden. In town gardens there are some allowances to be made, for shrubs, flowers, and vegetables being mixed up together; but in the country, where ground is no object, we see none whatever. Behind this garden are the hot-houses, two in number, in which were good crops of grapes, especially of the Black Hamburgh. Here we observed, as well as at other places, that incurable disease called the damping or shriveling of the footstalks of the berries and bunches, notwithstanding what has lately been written in this Magazine. Mr. J. D. P. says that the cause is cold damp air, and the cure plenty of fire heat. We are also strong advocates for plenty of heat, air, and water: our opinion, however, is, that the evil is not contained in the atmosphere of the house at all; but is a defect of the roots of the vine, and a want of proper nourishment; for every gardener knows that the disease first shows itself when the greatest demand is made upon the roots by the crop; and if it be a heavy one, the greater is the disease. In our opinion, the best way to cure the disease, or, at least, to lessen the evil, is to keep the vine border well mulched until the fruit is fully swelled, and then lightly to fork up the surface of the border. We would also thin well the bunches; give plenty of heat, air, and water; and not allow the vine to bear too large a crop. Leaving the hot-houses, we entered another small flower-garden, in which are some clipped yews of various figures, and some fancy seats. The mansion-house is situated on an eminence a considerable distance from the gardens; and the views from it are most delightful. A fine smooth spacious lawn lies in front, with a finely undulating surface of park, adorned with clumps of trees. The beautiful Forth, with its islands and rocks, North Berwick Law, and the Lothians in the distance, terminate the scene. When the planting and building about this place are finished, it will be one of the best in this quarter of the country.

About a mile to the west of Grangemoor is Balcaskie, the seat of Sir Ralph Anstruther, Bart.; a fine old place, with the gardens in the ancient terraced style. The house has undergone extensive repairs and alterations in its former style of architecture. The lawn in front is in the form of a parallelogram, divided in three parts by broad holly hedges, neatly squared up. In the eastern division is a well laid out modern flower-garden; a great number of small figures forming one large one, with a dial in the centre. This garden was well stocked with the most rare hardy plants, creepers, &c. In the middle and western divisions are some most magnificent laurustinuses, the largest we have seen in Scotland; and these, with the fine breadth of lawn between them, we should have greatly preferred to any cutting or carving whatever on the grass of beds for flowers. On the west wall were some ornamental vases with flowers and ornamental plants. The next terrace is a kitchen-garden; and the lowest of all, a kitchen-garden and orchard. Here were some fig trees bearing good crops. These two last-mentioned gardens are sadly dilapidated by the hand of time;

but they are to be renewed and improved next year. On each side of the carriage drive to the house are some of the plantations formed by Mr. Gilpin, the outlines of which are most laboriously twisted and turned about. The same interesting views are to be had here as at Grangemoor. The gardener here was from home, and consequently our stay was short.

Leaving Balcaskie, the admirer of

> "Nature's hills and woods,
> Her sweeping vales, and foaming floods,"

has a most interesting scene before him: the castellated tower of Balcarres, appearing like a ruin among the trees; the lofty spire of Kilconquhar church; the neat little village of Collinsburgh; the mansion house of Pitcorthie, glimmering through the trees; the stately Law [hill] of Largo, clothed with verdure to the top; and, beyond all, the spacious Forth, with numerous gentlemen's seats upon its banks, &c., are truly noble materials for the painter. Having reached Balcarres, the seat of Lieutenant-Colonel James Lindsay, we found Mr. Brewster, the gardener, immersed in the variety of business in which a large garden like this often necessarily involves its conductor. We entered the garden from the gardener's house, which is a very commodious one of two stories. In the hot-houses (three in number) the crops of grapes were good, with some very superior bunches of Black Hamburgh. These houses were formerly on the hanging trellis system invented by Mr. Reid, formerly gardener here; but it is now removed, and a trellis of wires parallel with the glass substituted in its stead. We next passed through a newly laid out kitchen-garden, in excellent order. In the corner of this is a small green-house containing some large specimens of Epiphýllum speciòsum, Cèreus speciosíssimus, and many other succulent plants. From this we entered a large fruit-garden with no spade culture except on the wall-tree borders; and Mr. Brewster does not condemn the practice. The wall trees are beautifully trained in the fan manner; and the centre of the garden is wholly planted with standard fruit trees and gooseberry bushes. The broad centre grass walk is planted on each side with georginas and an immense variety of heartsease. With such an assemblage of colours before us, these lines of the poet stole slowly through our minds: —

> ——— "Who can paint
> Like Nature? Can Imagination boast,
> Amid its gay creation, hues like hers?
> Or can it mix them with that matchless skill,
> And lose them in each other, as appears
> In every bud that blows?"

In the peach house were good crops of peaches and nectarines, trained on a hanging and table trellis, and on the back wall, in good order. The flower-garden is newly laid out, and is a piece of splendid workmanship, independently of the plants with which it is adorned. The upper half is in grass, with neatly cut figures, with some large Irish yews judiciously disposed over the surface. The figures in the other half are formed with box, and the spaces are gravelled. The proprietors, and more especially the lady, are most zealous promoters of horticulture and floriculture; consequently every plant that is new or rare soon finds its way hither. There are interspersed over the garden low seats of China ware, chiefly blue, but of various shades and forms, which add greatly to the beauty of the scene. On the north is situated a new substantially built green-house, containing many precious gems, with a small piece of rockwork planted with the finer sorts of rock plants. Mr. Brewster next showed us an extensive range of pine and melon pits; but the culture of the pine is now discontinued. The melons were good, and the cucumbers most astonishing; one, in particular, measured almost 2 ft. 6 in., and was perfectly straight. Our opinion of this place is, that there are too many fruit trees in the interior of the garden; but we believe these were planted as an experiment in shallow planting by Mr. Reid: and the hot-houses, &c., are faulty in being scattered up and down the gardens. Besides the inconvenience that must attend their working, what a noble appearance these extensive houses would have had, if they had been placed in one line! Great credit is due to Mr. Brewster for the orderly manner in which this place is kept; and it needs not to be told in this quarter that he is most enthusiastically devoted to his profession.

The last place we shall notice is Strathtyrum, the beautiful seat of Mrs. Cheape: it is situated on an extensive piece of elevated ground commanding a fine view of the city and bay of St. Andrew's. The gates and lodge front the Cupar road, and have a very neat appearance; but the approach road from the gate towards the house is very objectionable. The trees are planted close to the verge of the road, and meet at the top; so that, when looking from the gate, we can compare it to nothing else but a tunnel; and this must be obvious to any one who has a notion of planting. Had the trees been planted 30 ft. from each side of the road, how different would have been the effect, compared with the present! On the south side of the mansion-house is a fine flower-garden, in which is an elegant conservatory, containing a fine collection of camellias and other plants in the free soil, with a large stage in the centre for green-house plants, of which there are a great many. In the flower-beds are many new and rare plants, and an extensive collection of georginas in masses. The flower-beds are rather formal, and would require some alteration to bring them down to the present state of the gardenesque. The kitchen-garden is situated to the east of this elevated ground, where it falls abruptly, or, we may say, almost perpendicularly. It is surrounded by thriving woods, and, from its low situation, escapes every blast that blows. There are two fine grape houses and an extensive peach house, all which have borne excellent crops this season; and a fine melon pit, with other frames. The cultivation of grapes and melons is the hobby of Mr. M'Henley (the gardener), and he is eminently successful. Some large melons have been grown by him in this and the last year; but, above all, in 1832, he produced a fruit of the Royal George melon weighing 27 lbs. avoirdupois, which is the largest that has been grown in Scotland. We saw no difference in his culture of the melon from that of other gardeners, only that he waters liberally all over the plants at all times. This garden has been very much improved under the management of Mr. M'Henley, and more especially the box edgings, which are now very neat.

The Priory, *Aug*. 23. 1834.

ART. II. *A Description of the Moss House in the Flower-Garden at Bagshot Park.* Designed and executed by Mr. Andrew Toward, Gardener to Her Royal Highness the Duchess of Gloucester. Communicated by Mr. TOWARD.

I HEREWITH send you a description of the moss house in the flower-garden of Her Royal Highness the Duchess of Gloucester, at Bagshot Park. The form is an irregular heptagon (*fig*. 89.), with a Gothic portico in front, supported on rustic pillars. The ceiling of the portico is inlaid with moss of various colours, representing a star and diamonds, as shown in *fig*. 93., with a cornice of pinaster cones. The floor under the portico is a copy of the ceiling in different-coloured elliptical-shaped stones of a small size. On each side of the doorway are panels formed in the rustic style with different-coloured woods. The entrance into the house is Gothic; opposite to which are two Gothic windows with stained glass of various colours; under these are four square panels with a large diamond in the centre of each, all formed with moss. Along the sides, between the doorway and the windows, are seats (*fig*. 89. *a*) made of stained cherry tree: above these is a skirting of rustic wood 18 in. deep (see *l* in *fig*. 92.), the surbase of which projects about three eighths of an inch beyond the moss, to prevent the back from brushing against it. Each side above the skirting is divided into four square panels (see *fig*. 92.), and these into a succes-

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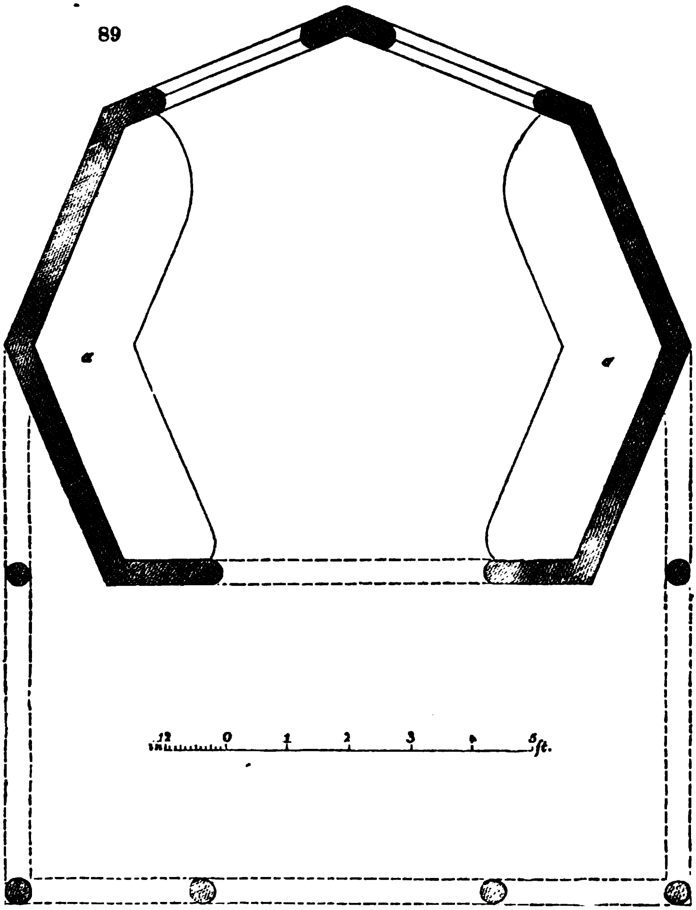

Ground plan of the moss house and portico: *a a*, the seats.

sion of squares (*k*). On the right and left of the Gothic entrance is an oblong panel, with between twenty and thirty of the most common species of moss arranged in horizontal stripes. In the spangles over the doorway are upwards of sixty species of moss and lichens, such as are too diminutive in growth to be incorporated into the body of the work. The whole of the above have been collected in and about this neighbourhood. Over the seats and windows are three horizontal pieces on a level with the ceiling of the portico, with various devices. (*fig.* 93. C, D, and E.) These pieces serve as a kind of plancier to the inner roof, which is a common span, with a gable end over the entrance, on which is represented the elevation of the building. The opposite

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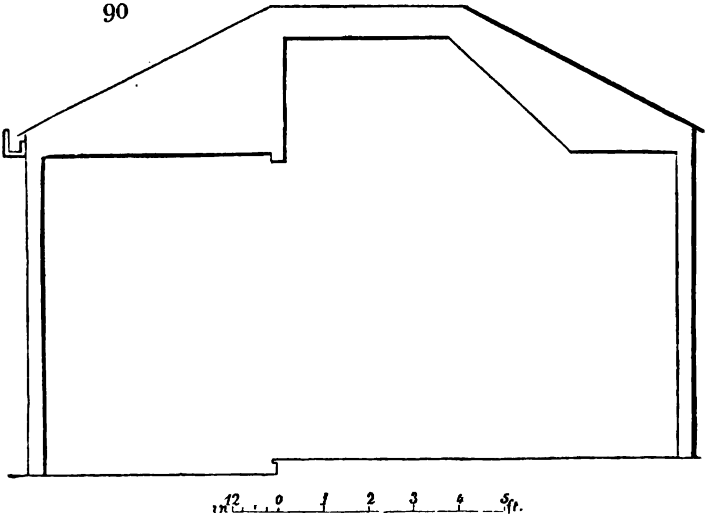

Section of the moss house from front to back, showing the interior and exterior roofs.

end is hipped in, and has the figure of the English crown. The whole of this design is executed in party-coloured moss. The

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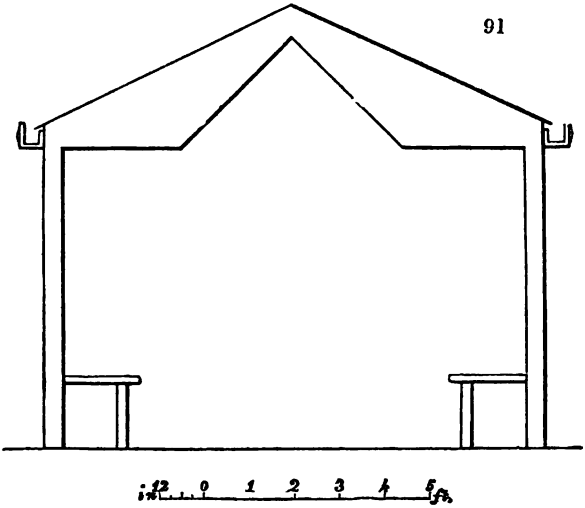

Section of the moss house from right to left, showing the seats and the inner and the outer roof, with gutters, &c.

ceiling of the span part of the roof is inlaid with light-coloured mosses in the form of diamonds.

All the styles, rails, and munnions of the panels are formed with Cenómyce rangiferìna (or reindeer lichen), which grows in great abundance on Bagshot Heath. The ridge of the outer roof is about 4 ft. in length, with six hips and projecting eaves; the plancier is of rough bark; and the fascia of pinaster cones, within which is a gutter to carry the water to the back part of the building.

I have to remark, that, had the whole structure been one foot higher, it would have appeared to much greater advantage: the walls are barely 7 ft., and they ought to have been nearly 8 ft. in height.

Fig. 94. is an elevation of the moss house, showing the situation of the window, the seats, the outer cornice of pine cones, floor of the portico, &c., mentioned above.

Fig. 89. shows the ground plan of the moss house and portico; *a a* are the seats.

Fig. 90. is a section of the moss house from front to back, showing the interior and exterior roofs.

Fig. 91. is a section of the moss house from right to left, showing the seats, and the inner and the outer roof, with gutters, &c.

Fig. 92. is a sketch of one of the sides. In this figure, *k* shows the disposition of the rods before the moss is introduced between them; *o* is Cenómyce rangiferìna; *p*, *H*ýpnum Schrébe*ri*; *q* is Dícranum glaúcum; *r*, *B*rỳum hórnum; *s*, *S*phágnum acutifòlium, pink var.; *t*, *S.* obtusifòlium; and *u*, *B*rỳum cuspidàtum. *l* is the rustic skirting above the seat; *m*, the seat; and *n*, the rusticwork under the seat.

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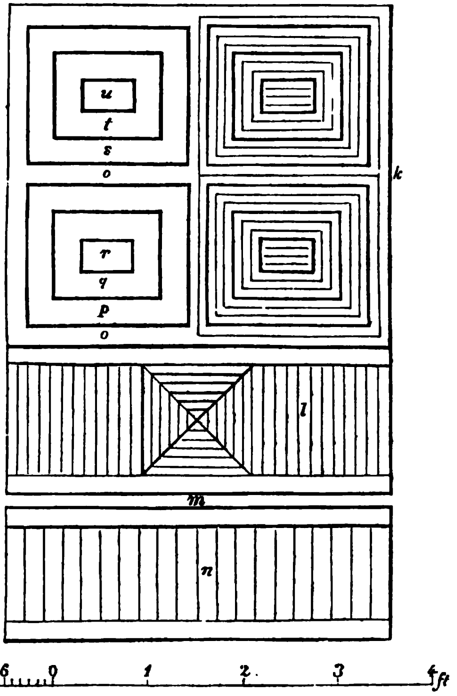

Fig. 93. is a plan of the ceiling to the portico, and of the horizontal part of the ceiling of the interior. In this figure, C D and E are the horizontal panels in the ceiling of the interior, over the

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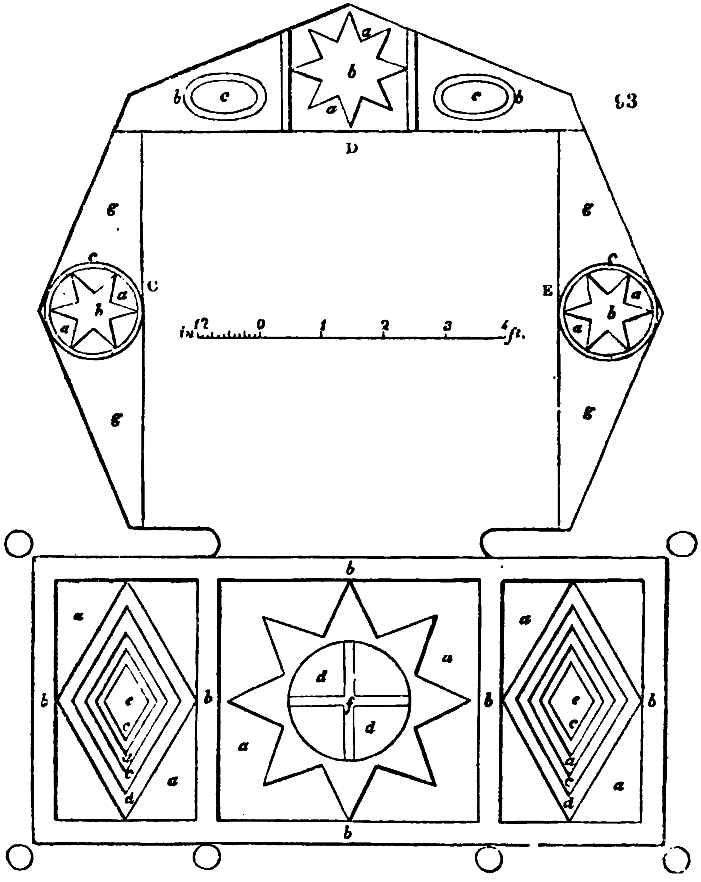

seats. The patterns in these panels are formed by round rods, as above described, between which are introduced the following kinds of moss: — *a*, *Brỳum* hórnum; *b*, Cenómyce rangiferìna; *c*, *Sphágnum* acutifòlium, pink var.; *d*, *Sphágnum* obtusifòlium; *e*, Dícranum glaúcum; *f*, *Brỳum* cuspidàtum; *g*, *Hýpnum* squarròsum; *h*, Dícranum scopàrium. The same letters refer to the ceiling of the portico.

The following is the method in which the work is performed. The first thing necessary, before commencing operations, is to have an even close-boarded surface to work upon; and upon this ground draw whatever figures, forms, or devices you intend to represent. The next thing is to get round rods, about half an inch or five eighths of an inch in diameter, nearly of equal size, and well seasoned. These rods are to be nailed on agreeably to the drawing, about an inch from centre to centre, this

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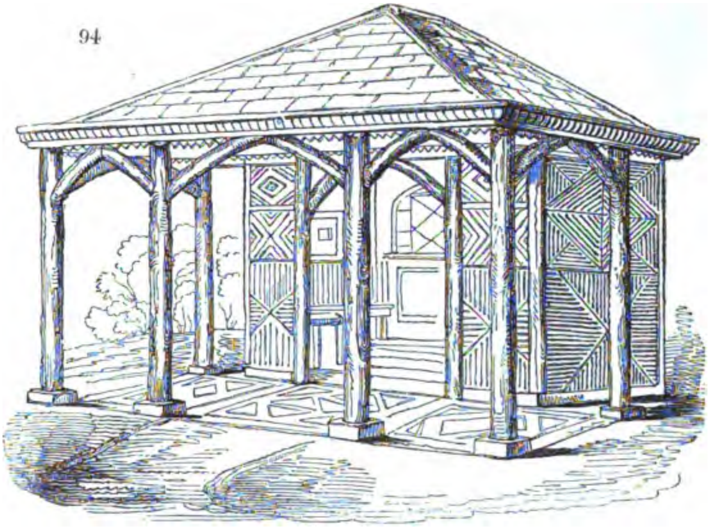

being the average space, though it is necessary to regulate the distance, in some measure, according to the space allotted for each sort of moss. Each species should be collected separately, when perfectly dry. It must be adjusted by placing the top of each piece as evenly as possible, and cutting off a part of the root end, if it should be found too long. Take a small quantity at a time, and ram it in between the rods with a blunt wedge-shaped piece of wood. The round rods act as a dovetail; and, if the moss be properly rammed in, it cannot be pulled out again without tearing it to pieces. The bottom part being compressed between the rods, the top expands, and so completely covers the rods that not a vestige of them is to be seen in the whole building. Its evenness of surface, closeness of texture, and variety of colour give moss thus arranged an appearance not unlike that of a Turkey carpet. The most common species of moss adapted for the purpose are, Cenómyce rangiferìna, the pure white of which contrasts well with that of most of the other sorts; 'Dícranum glaúcum, whitish green, and *B*rỳum hórnum, yellowish green, these are two of the best, and quite distinct in colour; *S*phágnum acutifòlium, the pink variety, and *S.* obtusifòlium, yellowish white, form a striking contrast with the greater part of the others; *Br*ỳum *r*òseum, pink, *B.* cuspidàtum, light green, Dícranum *s*copàrium, deep green, *Hý*pnum Schréber*i*, reddish, *H.* squarròsum, bright green, are all good; and *H.* lòreum, bright green, *H.* tríquetrum, yellow-green, *H.* (Lésk*ea*) dendröides, yellowish green, and some others, serve to make a variety.

Bagshot Park Gardens, July 10. 1834.

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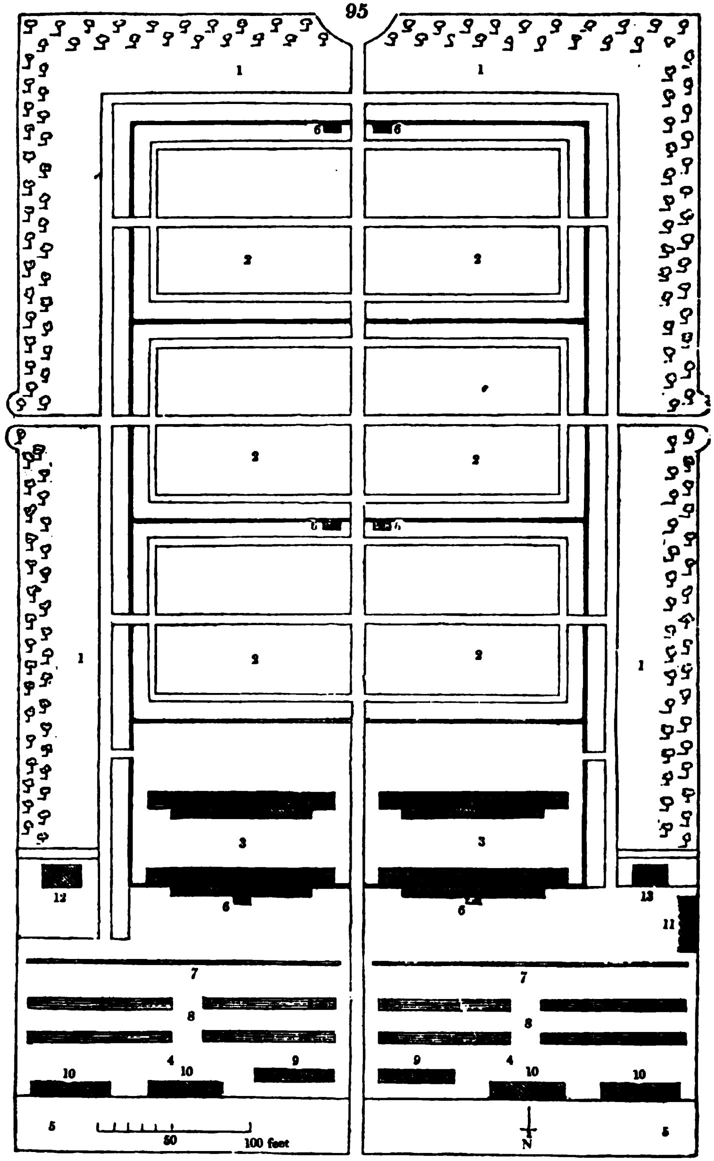


1, Slips. 2, Culinary departments. 3, Forcing department, with ranges of forcing-houses for adaptation, as may be required. 4, Frame ground. 5, For compost, mixing and turning dung, &c. 6, Water tanks. 7, Dwarf walls for training fruit trees, &c. 8, Ranges for framing, cucumber ridge, carrots and potatoes under heaps, forcing asparagus, &c. 9, Pine or melon pits. 10, Mushroom sheds, and for other purposes. 11, Open shed for compost, &c. 12, Gardener's house and yard. 13, Fruit and onion room, with seed-room over, and lodging-room for under-gardener.

[In Mr. Rutger's Design No. 3., p. 374., the row of standard trees on the inside wall border should be cancelled; and in Design 4., p. 430., back-sheds should be shown to the pine stoves 6 and 7. These errors and omissions were not made by Mr. Rutger, but by our artists.]

ART. III. *A Series of Designs for laying out Kitchen-Gardens.* By Mr. T. RUTGER. Design 6., *Containing Three Acres and a Half within the Walls, and Two Acres and a Half in the Slips.*

THE accompanying plan (*fig.* 95.) includes, with the forcing department, nearly three acres and a half, and the slips nearly two acres and a half more. The principal entrance to the garden may be either from the south or from the east or west sides. The forcing-houses are left for arrangement, as they may be wanted; as are also the ranges for framing, &c. The scale being smaller than those to the foregoing plans, the bordering for gooseberries and currants, or for espaliers, is omitted in the plan, but can be introduced in laying out the ground.

Shortgrove, Essex, 1834.

ART. IV. *On Pruning Forest Trees; and on Planting and Managing Belts of Trees.* By Mr. T. RUTGER.

THERE is something peculiarly satisfactory and gratifying to the mind, when the opinions of men of acknowledged merit and experience coincide with our own; but, when instances of the reverse happen, we are led to enquire into the reasons, and are not always willing to bend, even to the truth.

I must confess that I felt quite satisfied with what you have advanced in your *Encyclopædia of Gardening*, and with what has appeared in your Magazine, upon the subject of adjusting, in large transplanted trees, the proportion between the branches and the roots, and it was not until the other day, when I was turning over the volumes of your Magazine in search of the articles upon pruning, that Mr. Elles's paper (VI. 545.) arrested my attention. His arguments go to deny the necessity of adjusting the proportion of the branches to the roots, and your own observations at the close of that article countenance this opinion. Mr. Main, also, in his review of Sir H. Steuart's *Planter's Guide* (IV. 115.), strongly advocates the above principle; but it seems that Sir H. Steuart's system is of such a conservative nature, both in the preparation and in the after-treatment of large transplanted trees, that it renders success certain; and, as such, it deserves admiration, and to be applied to its utmost extent. It is only against the indiscriminate application of the system that I stand opposed; and thus I am led to agree with what Mr. Main says, at p. 123. of the review, that, "in cases where the roots are curtailed, and broken, our physiological tenets may be neutralised by the urgent calls of the mutilated plant, which may seem loudly to demand a provisional equalisation of its conservative organs," as cases may frequently occur, when time cannot be given for a preparation to be made upon the conservative system, so as completely to insure the end desired. If Mr. Elles intended to confine himself to trees prepared for transplanting by trenching round them the year before, and thereby provided with balls, I have no objection to what he has observed upon the subject; but, as there appears nothing in the article to convey such a meaning, I would make the following observations.

Above twenty years ago, I set about removing a purple-leafed beech, of about twenty years' growth, to assist in embellishing a lawn. I was fortunate in raising it with a good ball of earth, and replanted it without divesting it of a single twig: the tree evidently received a check, but afterwards grew well, and is now in good health and vigorous. So far, then, I agree with Mr. Elles. About four years ago I attempted to remove another purple-leafed beech, of about the same age, but was less fortunate in raising it with a ball; nevertheless the roots were tolerably well preserved; I replanted this, also, without pruning, in an equally favourable situation, with all possible care, and watered it occasionally, as I thought necessary: but it died. Query, Had the branches of this tree been adjusted to the proportion of its roots, would it have survived? Again, some years ago, I removed some very large laurels, some of which had two or three large branches as thick as a man's thigh, and were from 14 ft. to 16 ft. high. These I pruned, or rather lopped, divesting them of full one half of their branches and foliage. In the first year I hardly knew whether some of them would grow or not; but in the following year they began to thrive, and they are now as luxuriant as possible. Query, Would these laurels have lived, if none of the branches had been taken away? At the same time I removed some large Portugal laurels and planted them without either lopping or pruning, but they lingered and died. Query, Would they have died, had the branches and foliage been adjusted in proportion to the roots? Farther, I have frequently observed, in the transplantation of large deciduous trees without pruning, that several of their branches have died, and in some instances I have found that the whole of the branches have died back to the trunk. Query, In either case, would this have happened, had an adjustment of the branches in proportion to the roots been effected? Finally, three years ago, I had occasion to remove two apple trees which I was anxious to preserve; and, accordingly, great care was taken in their removal: they were both planted without pruning, and both died. On the management of these trees, another query may be added to those above.

Now, Sir, these are queries which I should like to see answered before I entirely abandon your theory, as laid down in your *Encyclopædia of Gardening*, 5th edit., § 2132. I conceive that reasoning as physiologically as we may, upon not adjusting the proportion of the branches to that of the roots, will be of little use in transplanting large trees; in which operation, if a due preparation of them has not been made, a loss, perhaps, of one third or more of their roots and fibres may take place. I must confess I am loth to set analogy and physiology completely at loggerheads, as Mr. Elles seems to have done: I conceive that both ought to be regarded, and consulted, in most of the operations in horticulture; and I think experience teaches us that sometimes the one, and sometimes the other, may be neutralised, and that they may at other times cooperate, and both prove useful in bringing about the end desired.

The following passage in the new edition of the *Encyclopædia of Gardening*, § 569., appears to confirm my own experience on the subject. " The English garden of the new palace at Stuttgart was laid out, in 1809, from a design by the late king. It was planted with lime trees, from twenty to forty years old, from the avenues of Ludwigsberg and Solitude. All of these trees died in three years; their heads were not reduced, and their roots were not cut round and prepared a year or two before transplanting. The places of the dead trees have been since supplied by lime trees, with stems of four inches in diameter; horsechestnuts, eighteen inches in diameter; poplars still larger; and platanus nine inches in diameter; all of which were planted with their branches severely cut in, and have succeeded perfectly." [This was stated to us on the spot by M. Bosch, the present Director-General of Gardens in Wirtemberg.]

But while upon this topic, I must observe, that the nature of soils has a great influence with respect to the success of every kind of vegetable product when transplanted, from the cabbage to the oak. Soils may be divided into two classes; viz., those which may be denominated dead and inert, and those which are quick and energetic. A fine, rich, deep, sandy loam, will work wonders in a garden; whereas, a poor, cold, hungry soil proves a constant source of disappointment and vexation to the gardener. I have seen cabbages planted in some gardens, where, at the end of four or five weeks, they have scarcely shown an indication of moving, while in other gardens I have witnessed them, in the same time, and at the same season of the year, nearly fit to cut. The analogy will hold good, I conceive, with regard to trees; and, in cases where large trees are removed from a soil congenial to their growth, to one that is the reverse, it is not to be wondered at if the transition proves fatal.

There have been some excellent papers given in your Magazine upon the pruning of forest trees; among which, that of

Mr. Main (VIII. 303.) stands preeminent; to which is appended a very proper eulogium by yourself. There are two principles in this subject, which I have laid down as resulting from experience: first, that nothing is to be gained in bulk by pruning; secondly, that much is to be gained by early pruning, towards obtaining fine timber with straight boles. To these principles a third may be added, namely, that little or nothing is to be gained by pruning, to increase the picturesque effect of trees themselves. With regard to the first principle, it appears obvious, that whatever wood a tree shall have made by the end of the season of growth, it will, by that period, have also made a sufficient number of roots or fibres to carry on by their extension, when the following season of growth commences, vegetation in every part of the tree, so as to cause a greater or less degree of growth, according to the tree's health, and the quality of the soil it inhabits. It is also reasonable to suppose that in proportion as the tree may be lopped or pruned, so will the action of the roots in rendering the necessary supplies be; unless it were possible for the sap vessels to be so enlarged or multiplied at once, as readily to receive and conduct all that the roots are capable of obtaining, which cannot be, unless a sudden enlargement of the tree were to take place in all its parts, which is quite out of the question.

Upwards of twenty-five years ago, I made several experiments in this way, particularly upon a beech and an evergreen oak. The beech stood in a group with others of more than twenty years' growth, all of which were forked from the bottom, owing to the neglect of early pruning. I made choice of one, and took off all its branches except the one which I considered the most promising, that is, the one most likely to make a fine tree. This tree is now standing, together with the forked ones, and the bole which was left is not in the least degree larger than the several branches on any of those that are forked. The result has been exactly the same with the evergreen oak; others near it, of the same age, being as large as the one operated upon. I found also that by taking off large branches in order to make handsome boles, nothing was gained towards accelerating an increase in the size of the trees, as others that had been left untouched, had made a progress in bulk equal to, if not greater than, those that had been thus pruned. Thus far has my experience gone upon the principle of pruning or lopping, to the end of obtaining bulk in timber.

With regard to pruning for the purpose of making handsome boles and fine straight timber, that is quite another thing; but upon this subject I need not dwell, as it has been ably handled already by several of your correspondents, who, I believe, all agree as to the efficiency of pruning, when practised at an early age of the tree, towards producing this end: all I would say is, that the pruning can scarcely be performed at too early an age. It is not calculated to produce the picturesque, as nature will do more in this, in ninety-and-nine cases out of a hundred, than man can do with either the knife, the saw, or the bill-hook.

The subject of thinning forests and plantations has also been ably descanted upon, and I have no doubt that all the communications thereon have their merits according to local circumstances, the objects of all being to obtain good and useful timber. Waving this subject, therefore, I beg to draw the attention of your readers to that of the thinning of belts. Now, these are generally planted either for the sake of shelter or ornament; the longer, therefore, they can be made to sustain their office, the better; and to accomplish this, not only is a judicious thinning necessary, but a proper choice should also be made in planting such sorts of trees as are disposed to feather themselves down to the ground. The great secret, in the planting of belts and the management of the trees afterwards, is to obtain and preserve a mass of foliage through the whole plantation. The idea of getting up a belt thickly planted with fast-growing trees, without ever thinning them, is preposterous. I have seen most deplorable instances of this, even to the destruction of the whole; and at the present day, in some parts of the country, you can scarcely take a morning's ride without witnessing and lamenting faults of this kind committed by either the planter or the proprietor. Belts being narrow, a good breastwork should always be provided; particularly on the sides upon which the winds are most injurious: when this is not done, and the trees are left to themselves, their under branches will soon decay, and the winds, thus having full scope, will do serious injury. The case is widely different with single trees which stand exposed, as they get inured to the vicissitudes of the weather; and, besides that, they have the advantage of a wider range for their roots, without any competitors to dispute with them, which might draw more nutriment from the soil. Single trees, consequently, soon become more robust than trees in plantations, and are of greater stability. I think the fir tribe is too often, even almost exclusively, made use of in the planting of belts; in cases where these trees are left to themselves, their lower branches soon decay, and, in consequence, admit light to be seen through the interval thus occasioned. This should be always prevented, if possible; and, to this end, the wider the belt is the better: narrow stripes of a few yards in width effect but little, when compared to a belt of considerable breadth; and although the planting, &c., in respect to the former, may be attended with less expense, the result in a few years will be much less satisfactory in point both of beauty and utility.

Shortgrove, Essex, 1834.

ART. V. *On the Rot in Larch; with Information on the Dimensions of the Layers of Wood produced in the Annual Growth of the Larch Tree, in a Series of Years, in connection with a Statement of the Quantity of Rain which fell in each of those Years.* By Mr. A. GORRIE, F.H.S. C.S. &c.

AGREEABLY to your request, I send you the following remarks on the rot in larch: a subject which, I am glad to observe, begins to excite attention.

My former note on this subject (VII. 374.), stating some reasons for the inference that, where the larch succeeds the Scotch pine (*P*inus sylvéstris), "the rotting roots of *P*inus sylvéstris form at least one powerful agent in promoting this disease," has been noticed in a scientific communication, by a gentleman signing himself G. I. T., in the *Quarterly Journal of Agriculture*, vi. 552. Every line in that excellent communication evinces an ardent desire in the author to discover the nature of the malady; an ardour every arboriculturist must approve, and many, I trust, will be induced to imitate. As I have frequent opportunities of investigating the subject in different situations, I, for one, shall, from time to time, transmit to you such facts as may come under my observation connected with this capricious disease, in the hope that they may meet the eye, and engage the criticism, of G. I. T. and others of your intelligent readers.

Although I cannot altogether agree with the theory advanced by your ingenious correspondent Mr. Munro (IX. 551.), and although I believe few can admire, or feel disposed to imitate, the flippant style in which he treats his practical brethren at p. 555., yet I feel thankful for his attempts to direct attention to an evil, the baneful effects of which it requires the union of practical men to counteract. In the remarks I have now to submit, I shall allude to such parts of his and of G. I. T.'s communication as the facts I may have to offer shall appear to confirm or contradict.

Having been lately engaged in cutting down several acres of larch (interspersed with other forest trees), of twenty-two and twenty-eight years' standing, I have retained specimens of a few that appeared diseased, sections of which I shall endeavour to describe. No. 1. is a transverse cutting of a larch tree planted by me in the spring of 1811; the section is made at about 1 ft. from the ground, and measures 1 ft. in diameter. The soil is strong black loam, about 14 in. deep, on a bottom of rotten whinstone or greenstone. The annular growth of the first four years from planting was 11 decimal parts of an inch each; in the year 1816, the annual layer of wood was increased to 26 decimal parts of an inch; in 1817, a wet, cold, and late season, the annual deposit measured 3 decimal parts of an inch; in 1818, it extended to 4 decimal parts of an inch. In 1819, during the vegetating season (that season commencing at the beginning of April, and terminating at the end of October), 16 in. of rain fell at this place. I mention this circumstance, because it is well known that a scanty or a liberal supply of moisture during the growing season is invariably followed, in healthy-growing larch trees, by a corresponding deposit in width. This year, the annular layer of wood measured ·5, or half an inch. The average fall of rain, during the vegetating season in 1820, 1821, and 1822, was 13 in. in each year; and the average annual deposit of wood for each of these years is ·22 of an inch. In the year 1823, the rain that fell in the summer months amounted to 21 in.; the temperature was low throughout this season, and the crops were unusually late in being secured. The annular layer of wood in this year measures half an inch. In the years 1824 and 1825, the rain for the same period measured 13 in. in each year; and, in each of these years, the layer of wood measured 3 decimal parts of an inch. In 1826, the quantity of rain in the summer months was, it will be easily remembered, unusually small; only 7 in. fell during the vegetating season, and about other 7 in. in what are termed the dead months of the year. The annular layer of wood for this year only measures ·2 of an inch.

During the vegetating season of four following years, the fall of rain averaged 18½ in. annually; and the annual deposits for each of these years averaged ·37 of an inch. Hitherto all seems to have gone on well; and, up to 1830, the tree seems to have been in a healthy state: but, although the rains were moderate in 1831, 1832, and 1833, the annual deposit for each of these years measures only 14 decimal parts of an inch; giving reason to suppose that the tree had become infected with the disease in 1830. The rot appears to have commenced on the south and east sides of the tree, and to have spread irregularly in that direction between the annular layers of 1823 and 1832. I must here beg to call Mr. Munro's attention to the facts, that the central layers are all sound up to 1823; and, as far as this specimen is concerned, " an extensive annual deposit of alburnum has " no " hand in the matter (IX. 555.), and that the growth of the first ten years has " not " given way." I have been the more particular in my description of this tree, it being the only one in thirty, of the same age, in which the least symptom of disease has appeared. The larch trees in this spot, now cut, stood from 20 ft. to 30 ft. apart, among oaks, with an undergrowth of filberts; and, being in a conspicuous situation, I had encouraged most of the trees to assume a natural shape by permitting the lower branches to remain extended at full length down to the ground. The trees, in spring and summer, assumed the appearance of so many pea-green cones, several of which still remain; and in none of those so clothed with side branches did the red wood appear to indicate a precocious maturity. I mention this, to direct attention to the state of the diseased tree, the section of which I have been describing. This tree had stood near a walk, and had had its branches pruned off up to the height of 8 ft. or 10 ft.

In going over from three to four acres of larch trees, where the soil was a strong deep black loam approaching to clay (see the *Quarterly Journal of Agriculture*, vi. 550., where Mr. Knight's opinion is quoted by G. I. T. as to argillaceous loam), mostly on a moderately retentive subsoil, the trees generally measured from 1 ft. to 15 in. in diameter, when cut near the ground. Here I found, in general, an approximation to early maturity: the red wood appearing in many of a dark colour, and extending to within 1 in. or 2 in. of the outside; apparently having nearly arrived at that period when, according to a quotation from Mr. Knight's letter, in the communication alluded to by G. I. T., the heart wood not receiving new matter, it might be said "to live no longer," yet it was such as is denominated sound by joiners. These trees were planted, I should have said, in 1805. In another two acres of larch trees, of the same age, which had grown in a strong black loam from 8 in. to 10 in. deep, but upon a dry and porous subsoil, and where the trees exhibited such strong symptoms of premature old age as to render their removal advisable, I found the red or heart wood generally extend to within five or six annular layers of the bark; and, of sixty of these trees, I found three completely infected; the section of one of which I shall describe, premising that the other two specimens present almost similar phenomena. Here I have again to beg Mr. Munro's attention to the facts, that, in each of the diseased specimens, the annular layers are comparatively narrow; and, in each, the central layers for the first ten years are sound. G. I. T. will also please to observe, that, in this instance, "a" very "dry soil" appears conducive to "decay at the heart." (*Quart. Journ.*, vi. 551.) The trees were planted, as I have said before, in 1805; and the three annular layers of 1805, 1806, and 1807 amount in breadth to 4 decimal parts of an inch. The deposit in 1808 measures ·15; in 1809, ·20; and, in the three following seasons, about ·3 of an inch each year. For 1813, the annular deposit measures only ·15 of an inch: this was a dry season. In 1814 and 1815, about ·2 of an inch each season. Up to this period, all the central layers are sound; but the disease in an inveterate shape begins to encroach inwards from the four following annular layers, which are all around quite rotten. In 1820, the wood was of a diseased colour, but firm; in 1823, the annular layer, like all those in healthy larch trees of that year, was larger than the rest; from 1826, the annular layers became very narrow; leading us to infer, that in that very dry season the disease had commenced. In examining the roots, I found several decayed into a soft spongy substance, within from 4 in. to 10 in. of the surface; the other roots were apparently healthy. The tap root (for each had a sort of descending root from below the centre) was sound; but, on cutting it across, the heart appeared of a livid unwholesome-looking red, indicating approaching decay.

To direct public attention to this interesting subject, I propose sending the two specimens described, with appropriate remarks, to the agricultural museum of Messrs. Dickson and Turnbull, Perth, in the hope that others will contribute specimens of similar trees, or rather of such parts of trees as may appear to them to be likely to lead to a knowledge of the disease. My next will contain my remarks on the larch succeeding the Scotch pine, as I expect to have an opportunity soon of giving plantations of that description, and others of the same age on similar soils, a liberal thinning. Where the larch has followed a crop of the *Pìnus sylvéstris*, I have but too much reason to fear I shall meet with many rotten at the heart, or "pumped," a term applied in this quarter for rotten or hollow hearted trees. I mention this as an answer to a query, in IX. 722., by the Rev. Mr. Bree. The proprietors of many larch plantations in this quarter begin to get experimentally acquainted with the term.

Annat Gardens, Jan. 8. 1834.

ART. VI. *A Diary of the Course of Culture applied to the Grape Vines at Oakhill, East Barnet, in Herts.* By A. FORSYTH.

SHOULD you consider the following diary of a course of culture applied to the vine here worthy of a place in your Magazine, I should be gratified by the insertion of it. Our success makes us bold to say, that we hope it may introduce a better mode of culture of that much-esteemed fruit in the remote corners of the kingdom, where your Magazine has been the means of enlightening and instructing many an inexperienced gardener.

The vinery is 34 ft. long, 16 ft. wide; with 2 ft. of masonwork, and 2 ft. of upright glass in front; and the roof is at an inclination of 27°. The whole interior is heated by a surface of hot-water piping equal to 312 square feet. A tan pit, erected on piers of brickwork, occupies the centre floor of the house, except only a space of 3 ft. 4 in. all round, which is taken up by the pathway and hot-water apparatus. At the back wall of the house the soil is prepared to the depth of 6 ft.; and at the further extremity of the border (16 ft. wide) there are 3½ ft. of soil, composed of equal parts of the following earths: — Turfy loam (the top spit of a very old undisturbed piece of pasture, occupied as a rick yard), two parts; rotten dung, one part; lime rubbish, one part; gritty mud (the same as road-drift), one part. The vines are planted inside, there are twelve plants, and they are kept single-stemmed to the top of the house. When pruned, the spurs are cut back to one bud. The sorts cultivated are, Black Hamburgh and Dutch sweetwater. There is one vine of the Old St. Peter's in the house, it having been planted as a stock to be worked on for some kind more esteemed. I should pointedly remark, that the management of the temperature, so as to preserve it at the states registered in the diary, is here deemed a condition essential to success in the culture.

1833.	Maxim. by day.	Minim. at night.	
Nov. 8.	-	-	The vinery open. The wood ripe: not pruned. We have had two slight frosts.
9.	60	45	The vines pruned. The vinery shut up. No artificial heat applied.
12.	-	-	Vines pared; the loose and rough bark only taken off.
16.	60	45	Tan pit filled with new tan (twelve loads). Soil, pathway, &c., kept wet.
19.	-	-	Vines washed with soap-suds by means of a painter's sash-brush, the suds being in a tepid state.
22.	60	50	Vines anointed with a mixture of soft soap and black and white sulphur dissolved in warm soap-suds; the mixture applied to the vines at about 100° of heat. Vines laid down on the tan, and moistened with a fine syringe twice a day. The tan forked every other day.
25.	-	-	Forked the border about 3 in. deep; laid on turfy loam and old lime mortar, about 2 in. deep; then old hotbed dung, well rotted, 2 in.; the roots being near the surface, having been planted as shallow as possible.
26.	-	-	Walls whitewashed with lime and sulphur.
27.	-	-	Laid leaves on vine border, 1 ft. thick, and fresh hot dung, 1 ft.: protected the above from rains, &c., by reed covers used at other times for pine pits.
30.	-	-	The floor dressed with a coat of road-drift, for the sake of sprinkling.
Dec. 1.	65	55	Fire heat applied; and all the steam that can be raised produced.
8.	67	56	Sprinkling of pipes and pathways performed at all times, for the sake of steam and moisture. The heat of dung on border, 70°.
15.	69	57	Weather favourable: the nights often 50° or 52°; seldom under 40°. We have had only four frosts; the most intense as low as 26°.
22.	70	58	Buds perceived to be swelling. Heat of dung on border, 90°.
29.	72	59	Ceased to syringe vines. The sprinkling of soil, pipes, and path continued.

1834.	Maxim. by day.	Minim. at night.	
Jan. 5.	74	61	Buds breaking generally. Heat of dung on border, 96°.
12.	76	63	Weather wet and windy: nights, 45° to 50°.
15.	78	64	Shoots 2 in. long.
17.	78	65	
19.	79	66	Heat of dung on border, 65°.
20.	79	67	
21.	80	68	Largest spurs 1 ft. long: flower-buds as big as mustard seeds (white): bunches, 1 in.
23.	81	69	Shoots topped at one joint above fruit. If a lateral is produced, it is topped beyond one leaf: if it break again, top it again beyond one leaf.
25.	82	70	
29.	83	71	In dull days, when the weather is cold, and there is not sunshine, give a little air, keeping the temperature at 74°.
Feb. 1.	83	72	Dung on the border nearly cold.
8.	84	73	The flowers of one bunch (near the hot pipes) expanded: the first that have been.
12.	-	74	
15.	85	75	The vines in flower generally.
19.	-	76	Began to thin a bunch or two.
22.	85	76	Was thinning all day (at the top of the house).
March 8.	85	74	The berries of all set now: those of the Hamburgh as large as hazel nuts; those of the Old St. Peter's, the size of peas of the early frame kind. For the sake of the Dutch sweetwater, maintained 76°, instead of 74°, the proper temperature for the Hamburgh. After shutting up at night, the tan pit is forked sometimes, and sprinkled every night. The pipes are sprinkled at least eight times in twenty-four hours.
10.	85	73	Begin to give air always when the temperature is 4° above that of the night heat.
12.	85	72	Dung, leaves, &c., cleared off the border, to admit sun-heat, &c.: the border forked over.
14.	-	-	Finished shouldering the Hamburgh, and thinning the sweetwater and St. Peter's (neither of the two latter wants shouldering much). All spurs tied to wires; laterals cut clean out; bunches supported.
29.	85	72	Sweetwaters discovered to be changing colour for ripening.
April 12.	83	72	First berry of the Hamburgh beginning to change colour. Moisture withdrawn; plenty of air admitted; border watered with dung water (dry weather).
18.	-	-	About half of the berries of the Hamburgh reddened; about one third of those of the sweetwater perfectly ripe; the berries generally, each 3½ in. round.
22.	-	-	All watering of the soil for the vine roots, and sprinkling of the house to prevent dust, &c., performed when plenty of air is given, that *shanking* (shriveling) may not be induced in the berries. The border watered with dung water. Fruit swelling rapidly.
24.	-	-	Cut fruit of the sweetwater.

1834.	Maxim. by day.	Minim. at night.	
May 1.	-	-	Three days past have been cloudy and rainy. To colour the fruit of the Hamburgh, we keep firing to 77° by day (with front air, if rainy), and 72° by night; allowing ingress to a little air all night, the laps of glass being puttied.
6.	-	-	The fruit of the Hamburgh in high perfection; many of the berries each 3½ in., and in some few 4 in. round.
7.	-	-	The fruit of the St. Peter's changing colour: a few berries in a bunch a little brown.
10.	81	70	Grapes exhibited at the gardens of the London Horticultural Society, for which the large gold medal was awarded. A little air left all night, when thermometer stands above 50° out of doors; otherwise shut from ten till four.
16.	-	-	The soil well watered, to prevent the leaves decaying, and consequently unnatural hardening of the wood, which ought to be ripened in a deliberate manner, aided by the shade and surface of the leaves, according to the order of nature. The leaves are now of amazing size, green and vigorous, measuring, independently of the footstalk, 18½ in. by 15 in.; and this not in a solitary instance.
30.	-	-	Soil inside the house, and border outside, watered.
June 7.	-	-	Grapes again exhibited at the gardens of the London Horticultural Society, along with six pines. Both were accounted the best production exhibited, and prizes were awarded as such.
9.	80	-	Ceased to make fires. With a supply of air left as above, the temperature stands usually above 65°.
20.	-	-	The fruit of the Hamburgh fine; that of the St. Peter's ripe; the leaves still green and vigorous. All possible air admitted by day, when fine. Protected from rain for the sake of the fruit only. Shut up close from dusk till dawn.
July 1.	-	-	Fruit all cut. Left open with lights on.
10.	-	-	Lights off. The lights being off, no culture of any kind is given, except occasional waterings in very dry weather, to prevent a sudden and unnatural termination of the processes which actuate growth.

Art. VII. *On the Culture of Persian Melons.* By A Hertford Journeyman Gardener.

I observe that several persons consider the culture of the Persian melon more difficult than that of the common musk or European melon. Now, as, according to my experience, both sorts can be grown in abundance in the same manner, it may not be amiss to give a short notice of the system on which I proceed.

Our pit was 9 ft. wide; its slope at an angle of 21°; with a pit at the back, for linings, if wanted. In the latter part of October, we filled the pit with new tan, to the depth of 5 ft.; and with this we forced strawberries till toward the end of April, when we forked up the tan and trod it well, adding no new tan, nor using any lining. We then put in a ridge of soil along the middle of the pit. The ridge was about 3 ft. wide at the base, and, when well trodden and beaten, about 1 ft. 3 in. deep in the centre. The soil was composed of three parts of turfy loam, roughly chopped, and one of rotten dung. The plants having been prepared in the usual manner (one in a 60-sized pot) were, after they had shown the rough leaf, topped and turned out into the ridge in one straight line along the centre, 1 ft. apart. For a few days we shaded the plants from the more powerful and scorching rays of the sun; and we covered the pit with double mats at night till the second week in June. As soon as the plants had reached their fourth joint, they were again topped; after which they threw out laterals, and showed fruit. As soon as the roots had penetrated through the surface of the ridge, we soiled the pit all over, in the same manner and to the same depth as we had made the ridge. When the fruits had become impregnated (part of them were impregnated by artificial means, for the sake of greater certainty, and part by natural), and had begun to swell, each of them was laid on a piece of glass, and the shoot stopped at one joint beyond the fruit: the eye, also, at the fruit-joint was taken out as soon as it had been protruded: and all other laterals, and male blossoms, were pinched off as they appeared. In the evening of every warm day we sprinkled the pit, and also the plants, from the time at which the latter were planted out, until they had begun to show fruit. We took particular care not to wet the main stem of the plant, nor the soil immediately around it. We did not sprinkle at all while the fruits were being set, nor until they had been enlarged to the size of a goose's egg. After this period we resumed the sprinkling, and continued it until the fruits had become nearly full swelled, when all moisture was finally withdrawn, save only that, after intense sunshine, when the leaves would appear enfeebled, we bestowed a little water at the extremities of their roots. We admitted air during the period of rearing the plants and that of the swelling of the fruits, at 75° of internal temperature, allowing the thermometer to rise gradually to 90°, and in the hottest sunshine to 95°. While the plants were in bloom, we kept the pit rather hotter and closer than at other times. When the fruit had become well swelled, we admitted plenty of air, when the internal temperature was not under 80°.

In 1833, I had the following sorts promiscuously mingling vines with one another, and producing fruit to the satisfaction and admiration of my employer and other competent judges; viz., the Sweet Ispahan, Salonica, Cassabar, Scarlet rock, and Windsor prize.

ART. VIII. *On Protecting and Preserving Fruit Trees.* By Mr. JAMES EATON, Gardener to the Earl of Ilchester, at Melbury, Dorsetshire.

IN 1808, I finished making a new kitchen-garden, for the Earl of Ilchester, at Melbury. The borders were all of fresh maiden loam, 3 ft. deep and 12 ft. wide, well drained and paved at the bottom, and in them I thought peaches and nectarines could not fail to do well; but, to my great disappointment, they did only middling for the first two or three years, then they became so cankered and naked at the bottom, that I was obliged to take them away. I planted most of the borders again with trees brought from different soils: these did no better; and in a few years I was obliged to plant all my borders again. I changed the soil, and tried every method I could think of, but with no better success. I thought, at last, that possibly it was the cold that checked the sap in the spring, and thus injured the trees; and I had all my peach and nectarine trees, from the first year they were planted, covered every night, as soon as the buds began to open, till the middle or end of May, with a mat. I found this practice succeed perfectly, and when the trees got too big to be covered with a mat, I stuck small boughs of evergreens, such as Portugal laurel, &c., round their trunks; and let them remain till all danger from cold was over. When the trees became too large to be covered with either a mat or branches of evergreens, I sheltered the whole of the south walls, and part of the east wall, with curtains made of thin but strong canvass, called here Huiderlin canvass, which costs about 4*d.* per yard. These curtains consist of four breadths of canvass sewed together, and they reach nearly from the coping to about 18 in. from the ground. I draw them sidewise, like bed curtains, which I consider much better than employing lines and pulleys. I have wire rings sewed on a piece of strong tape along the top, the bottom, and two places between the top and bottom of each curtain, to keep it from being too much strained by the wind. These rings run on small iron rods like bed-curtain rods, fixed into studs made of deal or fir, about 2½ in. square, which are made movable, that they may not be obliged to remain. To effect this out of doors all winter, I have iron holdfasts driven into the wall near the top and the bottom, to fix the studs into; the top one stands 6 in. from the wall, and the bottom one nine. There are holes in these irons for an iron pin with a head to go in and through the stud to keep it firm. The curtain rods are made with a head at one end and a screw at the other; holes are made in the studs to slip the rods through them, and a nut is put on the screw, which keeps all tight. The curtains have a sheath or pocket at each side similar to the under valence of a bed, to admit a lath about 2 in. by three quarters of an inch. These serve to draw the curtains backwards and forwards. Loops of tape are sewed on at three or four places on both sides of each curtain, to slip over nails in the studs, to keep it from being blown by the wind. The laths are great strengtheners to the sides of the curtains in rough winds; and, till I used them, the curtains were often torn at the edges. I neither use line nor pulley, and the whole may be drawn or undrawn in fifteen minutes by one person. The distance the studs are from the wall, admits the sun to shine on it when the curtains are undrawn; so that no part of the tree is shaded so long as to hurt it. At the top of the studs, just under the coping, I have a sort of weather-board, about 9 in. wide, tacked on to protect the trees from downright frosts. I keep the studs, rods, irons, and weather-boarding well painted; and, when not in use, all the movable part of the apparatus is put away in a dry place; and all except the curtains will last nearly as long as the wall. I have a bit of lead with a number stamped on it, which is nailed to each stud, and a corresponding number is nailed to the wall, so that every stud is fixed in its own place without difficulty; and the curtains are all made exactly of a size, so that they will fit any place. I have found the curtains of great use to draw over green gage and other plums just before they are getting ripe, in heavy rains, to prevent them from cracking.

About the beginning of February I have every part of my peach and nectarine trees unnailed, and well washed with the following composition, applying it with a paint brush to every part:—1. Soot, quicklime, Scotch snuff, and sulphur vivum, one pound of each, put into a large water-pot full of soap suds and urine. Let the mixture stand two or three days after stirring it, and then it will be fit for use. I find this composition useful for preserving the trees, as well as killing the insects; it causes the trees to look as green the summer after it has been applied, as a coating of manure makes a pasture field look the summer after it has been dressed. I recommended it to a neighbouring gardener; and, as he was using it, his employer advised him to be cautious how he used it, till he knew it better. He left off at once; and, during the summer after, any one could see, across the garden, how far the tree had been done; for the part that was done looked of a dark green, and the other a yellow colour. I have not at this time an unhealthy tree in the garden; and, though this last was a trying spring for fruit trees, I have had this season the finest and best crop of peaches and nectarines I ever had in my life.

Melbury Gardens, Sept. 6. 1834.

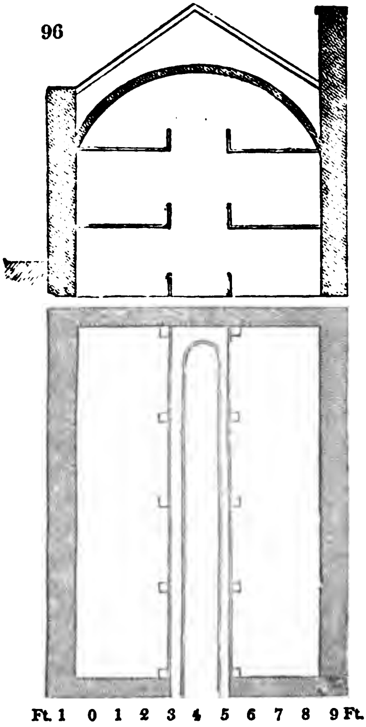
Art. IX. *On the Method of growing Mushrooms practised at Stoke Place, with a Plan of the Mushroom House there.* By Mr. Andrew Patrick.

As you requested me to send you the plan of one of my mushroom houses, I, at the same time, have sent you an account of my method of growing mushrooms. It may be new to some, though it is old to me, as it is a method which I have practised for many years; and, I am proud to say, I have never missed a crop. No sort of compost is necessary.

I take a quantity of dung, fresh from the stables, and throw it together in a heap, until I think I have got a sufficient quantity for my purpose. This, of course, will heat violently; and will frequently, when turned, appear quite white. Many gardeners will at once condemn this practice: however, experience has taught me to approve it; and the whiter the dung is, the better I like it. Having procured a sufficient quantity for my purpose, I proceed to turn the heap; rejecting only the longest of the litter, and preserving all the droppings with the shorter litter. Having done this, should any part of it be dry or white, I proceed to turn that over again; and, as I go on, I take a watering-pot and rose, and sprinkle it just sufficiently to make it ferment. When the whole is finished, I throw it up lightly into a conical heap, again to ferment. If the weather should prove very frosty or wet, some of the long litter that was shaken out at the first turning must be thrown all over the heap, to keep it dry until the heat arises; which, according to the state of the dung, will be from four to seven days. This second fermentation will be strong, but perfectly sweet, as all the rankness will be gone from the dung in the first fermentation. It will now be in a fit state to put into the shelves or beds. If you can procure enough fresh dung at once for your purpose, it must be thrown together in a heap (as I before said), short and long together, and not be turned until it heats itself dry; then treat it as I have before explained. Having the dung thus prepared in a strong fermentation, and neither wet nor dry, proceed to put it into the shelves; putting a layer of dung all over the bottom of the shelves, about 6 in. thick. Beat that down as tightly as you possibly can; and then put on another layer, and beat that as before; and so on, till your beds are 9 in. thick when finished. In the course of three or four days, the dung on the shelves will again heat quite strong: the beds must then immediately be bored. To accomplish this, you must be prepared with a sharp-pointed dibber, about 1½ in. in diameter, to mark out the holes, which ought to be 8 in. or 9 in. apart. This first dibber is only to make way for a second, which must be 3 in. in diameter. The holes should be pierced with this at least 6 in. deep; and left open to carry off the steam, and bring the dung into a proper temperature to receive the spawn, which, in the winter season or spring, will generally happen in about a week after boring. In the winter season, I always spawn when the heat is a little lively; but, in the summer season, it is immaterial if the beds are nearly cold. Having the beds thus ready to receive the spawn, I break it into pieces about 1½ in. or 2 in. square. If the spawn is good, that size will be quite sufficient; for it is my opinion that a bed may be overdone with spawn, as well as any other crop may be overdone with seeding. Wrap each piece of spawn in a little clean dry litter, such as was shaken out of the dung when first turned: this, in my opinion, is very essential in insuring a productive crop; for, if the beds should be a little too warm or too wet, in either case it is the means of preserving the spawn. In this litter the spawn will quickly begin to work, as may be seen by pulling out one of the lumps a short time after having spawned it. One of these lumps is to be put into each hole; and, when the whole is completed, the beds are to be beaten down level with the back of a spade, the whole to be earthed and finished off as expeditiously as possible.

It is customary with many gardeners to make, perhaps, one, two, or more beds in a house, in succession: but this is a plan I would by no means recommend; for, making new beds in the same house, when others are in full bearing, without due caution, is very often prejudicial to the crop. Where a regular succession of mushrooms is ripened for a moderate or large family, two or more houses, the size of the plan I have given, would be necessary. I would recommend this size as nearly as possible, as I have often observed that mushrooms generally succeed in small houses better than in very large ones: and out of these same houses, when in full bearing, I have frequently gathered three bushels per week. But to return to the earthing of the beds. A proper quantity of strong loam, if it can be had, is to be preferred to any other mould: I generally take the loam of the second spit, to avoid wormcasts, which are very often hurtful to the beds. Break this well to pieces, and run it through a coarse sieve; cover the beds all over with it, and beat it down as firmly as possible; so as, when finished, the covering of loam may, on every part of the bed, be 2 in. thick. The quality of the mushroom very much depends upon the solidity of the earth; for, if that is not firm, they will often form themselves between the dung and the soil, and push up through it; and, when this happens, they will generally be thin and open. But, if the earth is properly beaten down, the reverse will happen: they will form themselves in large clusters on the surface, no larger than pins' heads, and will very quickly increase in size and solidity; and remain unopen, or buttons (as they are generally termed), till they attain a great size. If the mould is so dry that it cannot be beaten down firm enough (which will sometimes happen in making beds in the summer season), when the beds are earthed, they must be gently watered with a watering-pot and rose, and left a few hours to dry a little before they are beaten down: should the earth prove in any way adhesive to the spade, have a pail of water standing by to dip the spade in occasionally, to keep the back clean, so that the earth may be firm and smooth. Beds thus earthed will, when finished, have more the appearance of strong clay than loam; and one would suppose it almost impossible for any thing to grow upon them. However, from experience, I have learned that beds so prepared will not disappoint the most sanguine expectations. Some may think it is not necessary to make the beds so deep, and the covering of earth so thick; and some may think it a bad plan to earth the beds immediately after spawning: but, in my opinion, these three things are eminently useful; and, without them, a lasting and productive crop cannot be expected. Where beds are thinly and loosely earthed, they will sometimes bring mushrooms very quickly, especially when they have been spawned some time before earthing; but the crops will be both weakly and unproductive, and, instead of coming up in strong clusters, the mushrooms will be thinly studded over the bed. The reason of this, in my opinion, is, that, in such beds, there is not a sufficient body of dung and mould to nourish a crop of mushrooms for any length of time; and, when the beds are spawned a considerable time before earthing, the spawn has expended much of its strength among the dung. The consequence of this is, that, when a quantity of cold wet soil is thrown on the beds when the spawn is in this working state, it chills and often destroys the crop; while, on the other hand, by earthing the beds as soon as they are spawned, the spawn can receive no check whatever from that process, and it begins directly to work. When the spawn spreads in the dung downwards, it immediately enters the earth upwards, and impregnates the whole mass. Mushroom beds, made after the manner I have recommended and described, will always be a fortnight or three weeks longer in coming into bearing than beds made in the common way; but, when they do come, they will amply repay the loss of time: they will generally continue in full bearing two or three months, and will produce a pretty good crop for five or six months. Mushroom beds ought to be kept very moderately moist; and, for this reason, I prefer close-bottomed shelves to open ones, as the beds will not be so soon dried, and will, therefore, require less watering. Great caution ought to be used when preparing the dung for the beds, so as not to have it too moist; and I have frequently seen beds made, without due regard to this, that have totally failed. In this case, the mushrooms appear quite thick all over the beds; but they quickly disappear again, without coming to maturity. The sole reason of this is, that the beds have been made of too wet dung; and, when this happens, the beds ought to be immediately destroyed, and fresh ones made: it will be folly to wait, thinking there will yet be a crop, as the mushrooms will never more make their appearance. The mushroom house ought to be kept about 60° of heat until the mushrooms appear; and then 55°, as nearly as possible.

96



The same method of preparing the dung, spawning, and moulding, answers exceedingly well for ridge beds. I have nothing to say against the ridge system, only the beds are not so conveniently got at in bad weather. By opening these beds, when the frost is very severe, they often receive such a chill, that it is some time before they recover; and, except they are very well protected in wet weather, that will likewise be injurious to them. But, in mushroom houses, you can get at the beds in any sort of weather, without any risk or trouble: the mushrooms are perfectly clean; and the whole of the crop is at once exposed to view, as they will not require to be covered with anything.

The plan I have sent you (*fig.* 96.) is of my winter house, heated by 4-inch cast-iron pipes, fed from an adjacent boiler; which likewise heats a range of brick pits, 89 ft. long and 7 ft. wide. My summer house is exactly the same, only without the hot-water pipes. Both houses are ventilated by means of a slide in the door; and a wooden trunk up through the arch and roof, with a slide in the bottom part of the trunk.

Stoke Place, Jan. 27. 1834.

MISCELLANEOUS INTELLIGENCE.

Art. I. ARBORETUM BRITANNICUM;

OR,

Portraits from Nature, to a Scale of a Quarter of an Inch to a Foot, of all the Trees and Shrubs which endure the Open Air in Britain, of the Size which they attain in Ten Years in the Neighbourhood of London; and Botanical Figures in Flower, and in Fruit or Seed, of most Species. The Letterpress will contain Scientific and Popular Descriptions of all the Species figured; Directions for their Propagation and Culture; and Observations on their Uses in the Arts, and more especially in Landscape-Gardening.

By J. C. LOUDON, F.L.S. H.S. &c., Conductor of the Gardener's Magazine, &c.

To form Three Volumes 8vo, and to be published in Monthly Numbers, at 2*s*. 6*d*. each. No. I. will appear on January 1. 1835.

The above is the proposed title of a work on which we are now engaged; and which, though it will form a treatise complete in itself, may be considered as the first Part of our *Encyclopædia of Landscape-Gardening*. The object of this work is, to spread a taste for foreign trees and shrubs, by showing their great number and variety, their individual beauties and characteristics, and the rapid growth of many species; but, among all our objects, that which is uppermost is, to show that there can be no landscape-gardening in the natural or irregular style, where only the indigenous trees of a country are employed.

Hitherto it has been considered that the object of the landscape-gardener, in laying out grounds in the modern or natural style, is to imitate nature, and to produce picturesque beauty. The principle of the imitation of nature has been carried so far, by some theorists, as to induce them to recommend the production of fac-similes of wild scenery; while others, who do not go quite so far, would yet employ only, or chiefly, the indigenous trees of the country in which the grounds to be laid out are situated, in order that the woody scenery so produced might be mistaken for such as is natural. There is not a single writer, as far as we are aware, from Shenstone to Knight, Price, and Gilpin, who does not adopt the imitation of nature as a principle; and who has not, at the same time, forgotten, or failed to see, that, in so far as landscape-gardening is to be considered one of the fine arts, the principle of the imitation of nature must be rendered subordinate to that of the Recognition of Art. If the imitation of nature were the sole principle of guidance, then the perfection of park scenery would be, that it should be so like the scenery of a natural forest, as that it might be mistaken for it. Now, though such scenery round a castle might be very feudal and baronial-looking, and, perhaps, what many would prefer, yet it would have no pretensions whatever to be considered as a work of art. So far from art being so concealed, in the productions of modern landscape-gardening, that it should be nowhere discovered, a principle as old as Tasso (*L'arte che tutte fà, e nulla si scopra*), the true, and, indeed, self-evident, principle is, that art should be discoverable everywhere in every work of art: in modern landscape-gardening, for example, in the smoothness of the turf, in the high keeping of the walks, and, above all, in the predominance of exotic trees, shrubs, and plants over indigenous ones. Even the turf should be composed of grasses different from those of the surrounding grass fields. In the ancient or geometrical style of landscape-gardening, art was everywhere avowed; and, therefore, so far, that style has greater claims to be called a fine art than the modern style, as the latter style is generally practised, or is recommended to be practised, by most authors who have written on the subject. The truth is, that the change from the old style to the new was so sudden and violent as to prevent the admirers of the latter style from examining it deliberately, and tracing it to first principles. But to enter into this subject properly would require more room than can be here afforded; and we, therefore, merely state, that the point on which all the authors who have hitherto written on landscape-gardening have been deficient is, the omission of the principle of the Recognition of Art. It does not follow, from this, that the writings of these authors are not good, so far as they go; because, in general, they have been guided by correct feeling: but, by stopping short of this principle, the claim of landscape-gardening to be considered a fine art has never yet been satisfactorily established, nor a sufficient reason shown why the use of foreign trees and shrubs is essential to the modern style. Henceforth it may be considered as an established principle, that there can be no landscape-gardening in the natural style, where only indigenous trees and shrubs are used. Where no foreign trees are to be obtained, recourse must be had to the geometrical manner of disposing of the local ones. Those who wish other authority than ours on this subject, we refer to the *Essai sur l'Imitation*, by M. Quatremère de Quincy; a work which a friend of ours is now translating for us, and which we intend to publish for the improvement of young gardeners and architects.

The progress of taste, like the progress of everything else, is gradual; and, when it is considered that it is only of late years that we have had anything like satisfactory theories of taste in the fine arts generally, it is not to be wondered at that we have not yet arrived at a comprehensive and satisfactory theory of landscape-gardening, which should at once trace the beauties of both the ancient and modern styles to the same fundamental principles.

We have said above that the principal effects in modern landscape-gardening, considered as a fine art, depend on the use of foreign trees and shrubs; and we shall now assign our reasons for being of this opinion. These reasons we have hinted at in various papers, more particularly in reviewing Mr. Gilpin's work (*Gard. Mag.*, viii. 701.), and in our Notes on Bearwood (ix. 679.). They are grounded on the principle that all art, to be acknowledged as such, must be avowed. This is the case in the fine arts: there is no attempt to conceal art in music, poetry, painting, or sculpture; none in architecture; and none in the geometrical style of landscape-gardening. Why should there be an attempt to conceal art in modern landscape-gardening? Because, we shall be told, it is an art which imitates nature. But, does not landscape-painting also imitate nature; and yet, in it, the work produced is acknowledged to be one of art? Before this point is settled, it is necessary to recur to what is meant by the imitation of nature, and to reflect on the difference between repetition and imitation. In what are called the imitative arts, it will be found that the imitation is always made in such a manner as to be a totally distinct work from the thing imitated; and never, on any account, so like as to be mistaken for it. In landscape-painting, scenery is represented by colours on a flat surface; in sculpture, forms, which, in nature, are coloured, are represented in colourless stone. The intention of the artist, in both cases, is not to produce a copy which shall be mistaken for the original, but rather to show the original through the medium of a particular description of art, to reflect nature as in a glass. Now, to render landscape-gardening a fine art, some analogous process must be adopted by the landscape-gardener. In the geometrical style he has succeeded perfectly, by arranging ground and trees in artificial surfaces, forms, and lines, so different from nature as to be recognised at once as works of art. A residence, thus laid out, is clearly distinguished from the woody scenery of the surrounding country; and is satisfactory, because it displays the working of the human mind, and confers distinction on the owner as a man of wealth and taste. A residence laid out in the modern style, with the surface of the ground disposed in imitation of the undulations of nature, and the trees scattered over it in groups and masses, neither in straight lines nor cut into artificial shapes, might be mistaken for nature, were not the trees planted chiefly of foreign kinds not to be met with in the natural or general scenery of the country. It is true that there are other circumstances belonging to a country residence which might determine it to be a work of art, altogether independent of the trees; but these circumstances we at present leave entirely out of view, and speak of the ancient and modern styles of landscape-gardening, solely as both are influenced by the kinds of trees planted, and by the manner in which they are disposed. We conclude, then, that the geometric style of laying out grounds is entitled to be considered a fine art in consequence of the manner in which the trees are disposed; and the modern style, in consequence of the numerous sorts of foreign trees employed. (See, on this subject, Art. I. in the *Architectural Magazine*, Nos. VI. and VIII.)

Though a taste for trees has existed from the earliest ages, that taste, in this country at least, may still be considered in its infancy. It is remarkable that a taste for foreign trees was earlier introduced in France and Germany than in Britain; and that it is still more general and more intense among the men of wealth and taste in those countries than in England. When Messrs. Loddiges planted their arboretum, in 1816, it is generally understood that the more rare species were obtained from Germany. Perhaps the cause may be, that natural woods cover a larger proportion of the surface all over the Continent than they do in Britain; because, abroad, in addition to their other uses, forests supply the place of our coalfields: and thus, though the subject of forest culture is more interesting to the Continental than to the British proprietor, yet the former sets less value on a native tree, and is more eager to display such as are foreign to the soil. An English landowner is almost always a great respecter of trees generally, but seldom knows anything of particular sorts: he, therefore, cares very little for their particular beauties, and contents himself with being an indiscriminate admirer of them. Hence, the unwillingness of most persons to cut down trees, however improperly they may be placed; or to thin out plantations, however much they may be crowded, and however great may be the injury which the finer foreign sorts are sustaining from the coarser-growing indigenous kinds. This indiscriminate regard for trees, and morbid feeling with reference to cutting them down when they are wrongly placed or too thick, are principally the results of ignorance of the kinds and relative beauty of the different species, and of want of taste in landscape-gardening. When we consider that it is not much above a century since American trees began to be introduced into this country, this is not to be wondered at; and, more especially, when it is remembered that planters, generally speaking, have few opportunities of seeing specimens of these trees, so as to become acquainted with them, and thus to acquire a taste for this kind of beauty and pursuit. The botanic and horticultural gardens, now establishing throughout the country, will tend to remedy this defect, by exhibiting living specimens; and our *Arboretum Britannicum* will, we trust, aid in attaining the same end, by exhibiting portraits, drawn from nature, of all the foreign as well as indigenous trees and shrubs which can endure the open air in Britain. The private arboretums established or establishing in so many country seats will also do much good in spreading the taste; and, when it is once properly understood that no residence in the modern style can have a claim to be considered as laid out in good taste, in which almost all the trees and shrubs employed are not foreign ones, or improved varieties of indigenous ones, the grounds of every country seat, from the cottage to the mansion, will become an arboretum, differing only in the number of species or duplicates.

In proposing, in the *Gard. Mag.*, to publish an *Arboretum Britannicum*, we invited all our friends and readers, in every part of the country, to assist us by giving us notices of fine specimens of exotic trees, or of newly introduced species or varieties, &c. We shall now show, in a more definite form, the kind of information which we should be glad to receive. As the work will appear in Numbers, we shall, three months before the publication of each, give a list of the kinds which are intended to be figured and treated of in that Number; and, respecting each of the exotic species contained in these lists, we should be glad to receive information with regard to the following particulars, besides any other which may occur to the reader: —

The Height which an average specimen of any of the species or varieties in the list below may have attained, as a standard, in the open garden or plantation; and the length of time that it has been planted there.

The Diameter of the Trunk, when a tree, taken at the height of 1 ft. from the surface on which it stands.

The Diameter of the Space covered by the Branches, and the general shape of the tree; as whether round, oval, narrow, compact, loose, regular, or irregular.

Notices of the Impressions made on the mind of the writer, by the properties or circumstances connected with each tree or shrub; such as its appearance during winter; the colour of its spray or young shoots, of its old shoots, and of its trunk; its kind of bark; its roots, whether racemose and few, or fibrous and numerous; its budding, leafing, foliage, flowering, fruiting or seeding; its defoliation, with the colours which the leaves assume before dropping, &c. &c. What, in the above and other particulars, has interested the writer may, by communication, interest and benefit others. In the case of species which have thriven remarkably in any given situation, it will be proper to state as many as possible of the circumstances connected with such prosperity; such as the soil, degree of moisture, subsoil or rock, exposure, climate, elevation, proximity to the sea, &c. &c.

The same of an average specimen of such tender kinds as are planted against a wall.

The most Northern Limit at which any of the species or varieties will grow as standards.

The most Northern Limit at which any of the species or varieties will grow against a wall.

The Largest-sized Specimen, as a standard; with its dimensions, and the number of years it has been planted.

The probable Height which the species would attain, as a standard, in ten years.

The following genera are intended to be contained in the early Numbers: — *Pæònia*, Magnòl*ia*, Liriodéndron, *Asímina*, Xanthorhìza, *Bérberis*, Mahòn*ia*, *V*élla, *C*ístus, *H*ibíscus, *T*ília, Stuárt*ia*, Malachodéndron, Gordòn*ia*, *Thèa*, Camèll*ia*, *Hy*péricum, *Á*cer, *Negúndo*, *Ǽ*sculus, Pàv*ia*, and Kölreutèr*ia*.

In addition to the above particulars, we are anxious to receive the History, Description, and Present State of all the Arboretums which have been commenced in Great Britain and Ireland; not merely of regular systematic arboretums in private or public botanic gardens or nurseries, but of all collections, however small, of foreign trees and shrubs. In short, we are desirous of such information as will enable us to give a Chronological and Geographical History of foreign trees and shrubs in this country. There are few old places which do not contain some fine specimens of one or two of these trees or shrubs; and what we want are, their measurement, and the year in which they were planted.

The progress made by foreign trees or shrubs which have been planted ten years or upwards is, perhaps, still more interesting than the date of the introduction, and the size, &c., of old specimens, because it shows the dimensions which such trees will attain in a short period; and, therefore, we trust that our practical readers will be liberal in their supply of information in this particular, for our first two Numbers, by measuring for us standard Magnolias, Liriodendrons, Asiminas, Berberises, Mahonias, and trees of the other genera mentioned above, which may have been planted within the last twenty years, in their part of the country.

The portraits of all our trees and shrubs will be to one and the same scale, viz., a quarter of an inch to a foot; and the botanical specimens (of which we shall generally give two of each tree, one in flower, or as it appears in spring, if it does not flower after ten years' growth in this country; and the other in fruit, or in seed, or as it appears in autumn, if it does not form fruit in this country at the same age,) will be all to the scale of two inches to a foot. We shall give no drawings which have not been made from nature; and shall describe no species which we have not seen ourselves in the arboretum of the Horticultural Society or of Messrs. Loddiges, or in some nursery or garden within ten miles of London. By giving all the portraits, exhibiting entire trees or shrubs of the size which they attain in ten years, to the same scale (which, as far as we know, has never been done in a botanical work before), those who propose to plant will see at once what they have to expect in ten years; adding a little to the bulk of the tree for countries south of London, and deducting proportionately for those to the north.

To the above particulars we would request the attention of the Curators of all Botanic Gardens; of all Nurserymen who keep specimen trees; of all the Proprietors of Arboretums, or the Gardeners who have charge of them; and of all Gardeners who have foreign hardy trees and shrubs, young or old, under their care. All information for No. I. should reach us as early as possible in November, as nothing can be used in the first Number which is not received in the course of that month. Letters, &c., in addition to our address at our publishers', must have the words *Arboretum Britannicum* on the cover. All communications received will be duly acknowledged in the work.

ART. II. *Floricultural and Botanical Notices of newly introduced Plants, and of Plants of Interest previously in our Gardens, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; in monthly numbers, each containing eight Plates; 3*s.* 6*d.* coloured, 3*s.* plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; in monthly numbers, each containing eight plates; 4*s.* coloured, 3*s.* plain. Edited by Dr. Lindley, Professor of Botany in the London University.

Sweet's British Flower-Garden; in monthly numbers, each containing four plates; 3*s.* coloured, 2*s.* 3*d.* plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

POLYPETALOUS DICOTYLEDONOUS PLANTS.

III. R*anunculàceæ.*

1631. *CLE'MATIS.*
montàna *Ham.* mountain ⅃ or 20 my W Nepal 1831? L l Sw. fl. gar. 2. s. 253

A highly ornamental hardy species from Nepal, "which seems to flourish as well in the climate of England as on its native mountains." It is a large-habited branching species; and produces numerous white flowers, of about the size and form of those of *A*nemòne sylvéstris. The figure is derived from specimens supplied, in May, 1834, "by Lady Sarah Amherst, from Montreal, Kent, the seat of her noble father." (*The Brit. Flower-Garden*, Sept.)

1596. ***PÆO'NIA.*** **[of Botany, Oct. 1834, 197. fig.**
Reevesiàna Paxton Reeves's ✱ ⌋ or 3 ? su Dp.C China ... C r.l Paxton's Magazine

The figure exhibits a most gorgeous flower, full of petals of the deepest crimson, and these symmetrically disposed: the flower orbicular in outline. The kind is set down as a variety of *P.* edùlis; but it is named a "tree pæony," is stated to have "many half-shrubby stems," and to be eligible to be "treated and propagated like the other moutans." In this case, we omit to guess which species it is a variety of: the figure, and Mr. Paxton, in his description, teach that it "is certainly a very striking sort, and well worth cultivation." We should say, most especially so. The figure had been derived from the nursery of Mr. Tate, Sloane Street; "who has several other unique things from the same quarter of the world" (China).

XV. *Magnolì*àceæ. Magnòl*ia* odoratíssima is figured in the *Bot. Reg.* for Oct., t. 1709. A flower of from 3 in. to 4 in. across is shown, and shown to consist of twelve petaloid teguments of a tawny colour. Stamens approximate, tawny. The description is deferred until November.

XLVI. C*ácteæ.*

3359. ECHINOCA'CTUS. (*Echinos*, the sea urchin, *kaktos*, an allied plant; the spine-bearing ridges of the stems resembling the spine-bearing ridges in the *E*chini.)
Eyrièsii Otto Eyries's ♄ ⊐ fra 1 ? var. seas. W.Y Mexico 1829 ? C s.p Bot. reg. 1707

A night-flowering species; with a flower which exhales a delicious odour, and is, in the length of the tube, and expansion of the border, not considerably less than that of the night-flowering cereus. The expanded border forms a vegetable star; whose rays are of the softest white, while the disk is of a rich yellow, formed by the stigma and the clustering anthers. Sir J. Lubbock presented, some years ago, a living specimen of this species to the Horticultural Society. It flowers at various seasons, and now and then forms an offset. (*Bot. Reg.*, Oct.)

LVI. M*yrtàceæ.*

3363. ***JAMBO'SA.*** **[1696. 3356**
vulgàris *Dec.* common ♀ ▭ or 25 f.jl Ysh. or Gsh.W. E. Indies 1786. C p.l Bot. mag.
Eugèn*ia Jámbos* L.

This, the rose apple, a native of the East Indies, is one of the commonest garden trees of Madeira; but there is scarcely another that combines so eminently the beauties of flower, fruit, and foliage. The flowers are large, handsome, of a very pale yellowish or greenish white, have a slight fragrance of primroses or cowslips, and are produced in tassel-like bunches, which contrast with the thick dark foliage, and enliven the trees from February to July or August, when the fruit is principally in season. The fullest bloom is in March or April; and, just after this, the trees are beautifully enriched by the fine cinnamon-coloured or reddish young leaves or shoots. Nothing can exceed the loveliness and delicate appearance of the fruit; its rich clusters half-hidden by the dark thick tufts of foliage which clothe the outer branches. The fruit is a drupe-like berry, pear-shaped or subglobose, about 1 in. in diameter. Although one or two berries may be eaten with some relish, their overpowering perfume, and taste of rose-water, together with the want of juice, render the fruit generally unpalatable; and it is entirely excluded from the table or dessert, except to satisfy occasional curiosity. The fruit is produced in the greatest profusion; but used for no other purpose than sometimes to feed the pigs, which eat it greedily. The comprehensive figure published exhibits various stages of the plant's flowering and fruiting. (*Bot. Mag.*, Oct.)

LXXVII. *Leguminòsæ.*

2837. *A*CA'CIA.
24668*a* brévipes *Cun.* short-pedioeled ■ ⌴ or 6 sp Y N.S.W. 1810? C s.l.p Bot. mag. 3358

Appears closely allied to *A.* multinérvia *Dec.* It is figured from the Kew collection, in which it has been cultivated upwards of twenty years. It is there a shrub of rather robust growth, with upright branches. The phyllodia (leaves) are from 4 in. to 6 in. long, lanceolate-oblong, falcate. Heads of flowers pale yellow; borne, upon a very short stalk, in the axils of the phyllodia (leaves). (*Bot. Mag.*, Oct.)

XCIII. *Celastríneæ.*

35. 2868. *MAY'TENUS.*
253*a* chilénsis *Dec.* Chilian ■ ⌴ or 8 my G.Y Chile 1829? C p.s.l Bot. reg. 1702
Dr. Lindley suspects that this may be even the same as M. boària *Mol.*, No. 253. of *Hort Brit.*

A handsome evergreen shrub; which has been growing, for some years, in the garden of the London Horticultural Society. It succeeds best trained to the front of a south wall; but it also survives the winter without even that slight protection. It is a branchy shrub, with twiggy branchlets. Leaves lanceolate, serrate. Flowers in axillary groups of about four each, not showy. Corolla of a yellow-green colour. (*Bot. Reg.*, figure in Sept.; description in Oct.)

CXLIV. *Portulàceæ.*

3357. CALANDRI'NI*A*.
díscolor *Schrad.*? two-coloured-*lfd.* ⌴ or 1½? jl.au Bt.Ro Chile? 1834? S s.l Bot. mag. 3357

Stem half-shrubby. Leaves spathulate; of a glaucous green on the surface, purplish red beneath. Flowers large, twice the size of those of C. grandiflòra, produced from the tips of the branches: petals obcordate, of a bright rose colour. Figured from the Glasgow Botanic Garden, into which it had been received from the botanic garden at Göttingen. (*Bot. Mag.*, Oct.)

Monopetalous Dicotyledonous Plants.

CLXX. *Ericeæ.*

1339. *R*HODODE′NDRON 11018 ferrugíneum
2 álbum *D. Don* white-*corollaed* ♃ or 1 jn W Pyrenees? 1830? L a.p Sw.fl.gar.2.s.258

This is the variety, mentioned in p. 345., seen flowering in the garden of Mrs. Marryat, whence the figure published had been derived. Mr. D. Don has never remarked the variety in any other collection; but has stated, that, according to Bauhin, the white-corollaed variety is frequent on the Pyrenees. (*The British Flower-Garden*, Oct.)

CLXXXVI. *Compósitæ.*

2440. *SI′LPHIUM.*
†22246 perfoliàtum *L.* perfoliate-*lvd.* ♃ △ or 7 jl.d Y N. Amer. 1766. D co Bot. mag. 3354
†22250 trifoliàtum *L.* three-leaved ♃ △ or 6 jl.d Y N. Amer. 1755. D co Bot. mag. 3355

(*Bot. Mag.*, Oct.) There are fourteen or fifteen species of *Sílphium*, and every one of them worthy the best regard of the British gardener. In fine open autumns, free from severe frosts to a late period, the degree of ornament which they supply in the hardy flower-garden, in their numerous yellow flower-heads of considerable size, renders them of high value. Their flowers are well nigh the latest ornaments that it may be reasonable to hope for " ere winter shuts the scene."

CC. P*olemoniàceæ.*

498*c* LEPTOSI′PHON *Bentham.* (*Leptos*, slender, *siphōn*, tube; slenderness of the tube of the corolla.) *5*: 1. Sp. *5*. — [Bot. reg. 1710
*a*ndrosàceus *Benth.* Androsace-like-*inflor.* ○ or ♂ au.o P.B.W California 1833. S p

A bushy annual species, 8 in. to 10 in. high, with the leaves much divided, into linear segments. The flowers are disposed in terminal heads, surrounded at their base by a number of floral leaves. The long slender tube of the corolla projects beyond these leaves; and bears at its tip five spreading oval divisions, varying from white to pale blue and pink. The multitude of the flowers gives the plant a very gay appearance. Although the species is perfectly hardy, yet it cannot bear our summer heats; and only flourishes in the spring, or more particularly in the autumn, when the sun has lost its power, and the nights are cool with heavy dews. Sow in autumn for the flowering in spring; in June, for the flowering in September. Any kind of soil seems to suit it; but in that of a shaded America border may be best. (*Bot. Reg.*, Oct.)

CCXIII. *Solàneæ.*

591 *SOLA′NUM.*
4706*a* etuberòsum *Lindl.* tuberless ♃ △ or 2 jl.o Dp.P Chile 1829? D oo Bot. reg. 1712

Very like to the potato plant; yet its larger and more compact clusters of flowers, and its habit of not producing tubers, render it a proper plant for the flower-garden. It bears its rich clusters of deep purple blossoms, with a golden-yellow centre in each, from July to October; and is very easily multiplied by dividing its stout, rooting, underground stems. (*Bot. Reg.*, Oct.)

3474. NIEREMBE'RG*IA*. [C p.s Sw. fl. gar. 2. s. 255
aristàta *D. Don* bristle-pointed-*lfd.* ○ ? ♃ ? 30 or ⅔ au W.P Banks of the Parana 1832.

In habit it much resembles N. grácilis and N. filicaúlis; but is essentially distinguished from these by its broad, orbicular, not compressed stigma. Corolla white, suffused with purple, with the mouth of a deeper colour. A native of sandy plains on the banks of the Parana; from seed whence, sent by Mr. Tweedie, the plant figured has been raised by Mr. Neill of Canonmills, near Edinburgh. The plant thrives in a mixture of peat and sand; and the branches, lying upon the soil, root freely at every joint. (*The British Flower-Garden*, Sept.)

CCXXVI. *Hydrophýlleæ.*

478. NEMO'PHILA.
5937*a* insígnis *Benth.* showy ○ ⁎ or 1½ au B California 1833. S r.m Bot. reg. 1713

A procumbent annual species, with blue corollas above an inch in diameter. It has larger flowers than N. phacelioïdes, its habit is less straggling than that of N. parviflòra and N. pedunculàris. N. insígnis is stated to require a rich soil, not damp, and a situation fully exposed to the sun; and to be protected carefully from wet when forming its seeds, or they will not ripen. It is figured from the London Horticultural Society's garden; where "it has produced its seeds very sparingly, with all the care that could be given to it." (*Bot. Reg.*, Oct.)

MONOCOTYLEDONOUS PLANTS.

CCXL. *Orchídeæ.*

2530. CATASE'TUM.
†22657 semiapértum *Hook.* half-open-*flwd.* £ ◬ or ¾ n.f G Brazil 1834. D p.m.s Bot. reg. 1708

Its flowers are not so showy as those of C. tridentàtum; but they are peculiarly fragrant, a quality of which all the other known species are destitute. When the plant is in rapid growth, it will thrive the better if its roots are actually allowed to immerse themselves in water. (*Bot. Reg.*, Oct.)

ART. III. *General Notices.*

The extreme Fibrils of the Roots of Plants, it has been asserted by Duhamel and others, die annually in the winter season, and are renovated in the spring in the same manner as leaves. Mr. Knight admits the position to be true in regard to the fibrils of bulb roots, but denies it in regard to the fibrils of the roots of trees. To ascertain the point, the Rev. P. Keith took up portions of the roots of different plants, chiefly trees, at different seasons of the winter, and, as a result, he concludes that "the root is never wholly denuded of its fibrils or spongioles, as the branches are denuded of their leaves. A partial decay, with a partial renovation, of these organs, seems to be occurring at all seasons; but a total denudation of the root occurs at no season. If, with Mr. Knight, we admit of a total denudation of bulbous roots, I think it will not go beyond such as are taken up out of the soil for the winter; for, if the bulb is allowed to remain in the earth, it is to be believed that new fibrils will have begun to be protruded before the old ones have finally decayed." (*Phil. Mag.*, third series, v. 211.) Mr. Keith appears to have been the first to discover that vegetating roots do not receive their increments of length solely by the extreme points. Professor Lindley has since confirmed the experiments of Mr. Keith, which were made so long ago as 1819. (*Ibid.* p. 208.)

ART. IV. *Foreign Notices.*

AMERICA.

The first Annual Exhibition of the Columbian Horticultural Society was held in the City Hall of Washington, on the 5th and 6th of June. A large and splendid collection of green-house plants, and a great variety of garden flowers, vegetables, and fruits, were brought from the different parts of the district to the hall of exhibition. The season having been very unfavourable, it was apprehended that the exhibition would disappoint public expectation; but such were the zeal and enthusiasm of the horticulturists, florists, and others of the district, that it presented, even on the first day, a spectacle of beauty and splendour that surprised all who saw it, and that was said to be unsurpassed, in variety and profusion, by any thing of the kind ever before seen in this country. The committee, to whom its superintendence was assigned, displayed great taste in its arrangement by the admirable grouping and disposition of the plants, and, assisted by several ladies of the city and its vicinity, who kindly lent their aid on the occasion, succeeded in rendering it a scene of enchantment. The green-house plants and the numerous garden flowers were arranged on pyramids, in different parts of the spacious hall and along the walls of the apartment, leaving alleys, through which the visiter passed to gaze on the beauties and inhale the fragrance that breathed around him. Two small floral pyramids were constructed and arranged in the most tasteful manner, by several ladies of the district, consisting of at least four hundred varieties of the choicest and most beautiful garden flowers, chiefly from the parterres of Mrs. Bomford and Mr. J. Peirce, and supporting a magnificent silver vase crowned with flowers. Glass globes, surmounted with bouquets of roses, lilies, pinks, &c., and containing goldfish, were placed in different parts of the hall. At night the spectacle was, if possible, still more splendid and enchanting; as lights, interspersed among the shrubs, tropical fruit trees, and groups of flowers, gave additional brilliancy to the scene. During the exhibition, on both days, the hall was crowded by visiters, and all seemed delighted at the first effort of the Society, which so far surpassed their expectations, and gave so fair a promise of future excellence and utility. The committee of arrangements are entitled to high praise for their assiduity, and for the taste and untiring zeal they displayed in making the exhibition so attractive and beautiful. The exhibition was closed on Friday evening, the 6th, by an address from George Watterston, Esq., Cor. Secretary. After recapitulating the heads of Mr. Watterston's discourse, the names of the principal contributors are given, and afterwards lists of eleven persons who received premiums for flowers of from three to ten dollars each; of six persons who received premiums for fruits, viz., strawberries, gooseberries, cherries, almonds, limes, oranges, lemons, and citrons, from two to ten dollars each; and of twenty-two persons who received premiums for esculent vegetables of from three to five dollars each. Among the exhibitors only four gentlemen's gardeners are mentioned. A number of ladies and some gentlemen exhibited flowers and fruits without any view to premiums. The committee regret that it is not in their power "to name all who contributed their share to that splendid profusion of garden and green-house flowers in the bowls and vases, and on the pyramids, with which the upper end of the hall of exhibition was so richly decorated; they can only add, to the list of the names already given, those of Mrs. Seaton, Mrs. Col. Towson, Mrs. Dr. Gunnell, Mrs. A. Suter, Miss C. B. Smith, Miss

Watterston, Miss Wood, Miss Jones, and the Misses Barnard, among the ladies; and among the gentlemen, the Rev. Dr. Laurie, D. Munding, and especially Mr. T. Bates, who sent a profusion of very fine moss roses, and Mr. Bastian of Baltimore, and Mr. Camp, who sent some fine flowers, and, for the purpose of ornament and variety, several globes of goldfish. The collection of lemon, orange, and other trees of the citrus family," the committee state, " was very large, and some of the specimens were very choice." Some of these trees were remarkable for their extraordinary size, fine form, and abundance of fruit. " The collection of geraniums was very extensive; it comprised nearly all the old and many of the new varieties, and was remarkable for size of flower and brilliancy of colour." Among the more rare exotics were fine and very large specimens of *Strelítzia* reginæ, *Cýcas* revolùta, *Laúrus Cámphora*, *Fícus* elástica, *Thèa* víridis, *T. Bohèa*, *Nandìna* doméstica, *A'loe* arboréscens, *A.* língua, *A.* saponària, *A.* variegàta, &c., Epiphýllum *Phyllánthus*, E. speciòsum, Cèreus triangulàris, C. multangulàris, &c., Calceolària salviæfòlia; numerous large specimens of Agàve americàna, of both varieties, and of *Yúcca* gloriòsa. There were also plants of the pine-apple and aniseed, some very perfect specimens of the Monótropa uniflòra, of fine double-flowering white anemones from the neighbouring woods, a musk plant in bloom, probably the first that ever flowered in the district, and " from various private collections numerous splendid specimens of Epiphýllum speciòsum, in full flower." The committee speak in high terms of praise of the floral specimens, from the beautiful and extensive collections of Dr. M'Williams; Dr. J. S. Gunnell, the Society's botanical lecturer; William Rich, Esq.; Mr. J. Peirce; Mr. William Yates of Alexandria; Mr. A. Suter, and Mr. John Douglass. (*Daily National Intelligencer*, June 6. and 27. 1834.) We have great pleasure in recording an account of this first horticultural exhibition in the very heart of the North American Republic, and we hope there will be very speedily similar societies formed in the cities of the different States composing that immense Union. We would recommend the seedsmen in all the principal towns to attempt something in the way of a perpetual museum, such as that of Mr. Thorburn at New York; or an occasional one to last during two or three months, like those of Edinburgh, Stirling, and Perth (p. 504.), noticed in this Magazine.

New York, July 30. 1834.—I have just returned from a nine months' tour through all our Southern States. I travelled in my own open carriage, and stopped whenever I found any thing interesting in the way of farming, gardening, or building. I am happy to say we are fast improving in our country dwellings, though I did not find your *Encyclopædia of Cottage Architecture* so well known as I hope it soon will be. It is, however, in the book stores of all the principal towns, and therefore must soon find its way into the libraries of our principal people both in town and country. Colonel B. of Charlestown, who has a copy, told me that he thought it would do more good to America than all the other books you have written put together. I am glad your Gardener's Magazine now comes out monthly at a reduced price. Its circulation is sure to increase here, for Horticultural Societies are springing up everywhere. I am preparing an article for you on the Gama grass [?], and will send it along with some seeds as soon as they are ripened. It is considered here the best of all grasses for soiling. Mr. Thorburn is returned in high spirits, and has retired from his store in the city, to a farm in the country. I suppose that, having already written his life, he is now preparing his tour in England. I have just seen a fine basket of camellias landed from Messrs. Chandler; and a large box of tree seeds shipped for Mr. Charlwood. — *B.*

Philadelphia, April 19. 1834.—A Magazine of Gardening and Botany has recently appeared in Baltimore, and it is hoped will succeed, though there are scarcely any instances in this country of a periodical doing well for any length of time.—*J. M.*

Philadelphia, July 7.—[Our readers, if they will turn to vol. viii. p. 360., will find a letter from a journeyman gardener, a native of Ireland, who once worked for us at Bayswater; and who appeared delighted with America, and with the treatment which he received from his employer. His employer was equally satisfied with him; and, as we had sent him out, we were highly gratified at the result. We heard nothing of him afterwards till we received the following letter from his employer; which we publish without any names, as a caution to young gardeners.] Poor ——, whom you sent to me some three years since, in the course of the first year fell in with some old acquaintances from Ireland, and became very intemperate. He finally lost all his money, in some drunken frolic, was arrested, and sent to the city watch-house from Saturday night until Monday morning, when he was discharged on paying a trifling fine for being drunk. Through shame and vexation, he enlisted in a company of our army, then on its march to our north-western frontiers, against hostile Indians. The troops were attacked with the cholera before they reached the Mississippi. Many died, and great part of the remainder dispersed through the country. Some died miserably in the woods, and others were never heard of after. I fear poor —— died; but I can ascertain that fact (if known at our war-office), should he have relatives to enquire after him. — *R.*

The Toronto Horticultural Society was established in Upper Canada on the 1st of May, 1834, and the regulations and by-laws are before us. The president of the Society is the Hon. George H. Markland; and the secretaries are Messrs. B. Turquand and Alexander Gordon, to whom persons in this country, desirous of promoting the interests of the Society, may address communications. Mr. Knight, Dr. Lindley, Dr. Hooker, ourselves, and others, are constituted foreign honorary members, and Mr. Charlwood, Messrs. Skirving of Liverpool, Mr. Austin of Glasgow, Mr. Saunders of Guernsey, Mr. Gorrie, and all the secretaries of all horticultural societies whatever, corresponding members. Such a society is likely to do an immense deal of good in a comparatively new country, and we would recommend the secretaries to have their eye on the agricultural exhibitions of the British seedsmen, with a view of procuring from them seeds of improved varieties of grain and other cultivated plants. There remains more to be done in the way of introducing improved varieties of agricultural plants into general culture than most people are aware of. Implements and machinery may be copied from engravings in books, and modes of culture may be learned from the same source; but seeds and roots cannot be conveyed by pictures or descriptions from one country to another.

ART. V. *Domestic Notices.*

ENGLAND.

ARRIVAL, from Demerara, of the Botanical Collector, Mr. Thomas Colley. — I have no small satisfaction in announcing the safe arrival, from Demerara, of Mr. Thomas Colley, late foreman in the nursery of Mr. Fairbairn, at Oxford. I engaged Mr. Colley, in December last, to go to Demerara for the purpose of collecting plants generally, but more particularly the different species of epiphytal Orchídeæ; and he has now returned, with about sixty species (many of them new) of the latter, and several novelties in other families. In the course of his botanical travels, he explored large portions of the Essequibo, Massaroni, and Corgooni rivers; and the whole of the adjacent colony of Berbice. Although exposed to dangers and hardships of every description, for the space of four months, his health was never in the slightest degree affected: and, such is his enthusiasm, that, although so recently landed on his native soil, he is already prepared to leave it on another botanical expedition. Should this, therefore, ever meet the eye of any person or society desirous of sending out a collector of plants, or of specimens in other branches of natural history, I should be most happy to recommend Mr. Colley as in every respect admirably suited to the purpose. Through his exertions, and those of Mr. Henchman (who penetrated the interior of Guiana, beyond the rapids of the Essequibo), little, probably, remains to be obtained from that quarter of the world; but there are many other countries, at once rich, and as yet unwrought, respecting which, and the comparative advantages they offer to collectors, I am now preparing a paper; which, should you deem the subject not unworthy of the pages of the Magazine, I shall have great pleasure in sending you for insertion in it. — *James Bateman. Knypersley Hall, near Congleton, Sept.* 11. 1834.

Highclere. — We are much pleased, in this part of the country, by your description of Highclere (p. 245.). You have only done the place justice. — *Selim. July* 25. 1834.

High Keeping. — You have convinced me that high-keeping is the chief beauty of small gardens; and, as it requires constant attention to keep up an appearance of neatness, I have this summer spent all my leisure hours in the garden, and have little or no leisure time for writing or drawing. When gardening ceases to be a pleasure, and the evenings lengthen, I hope to send you something for both the Gardener's and Architectural Magazines. — *Idem.*

Growing Plants in Moss. — Your correspondent Mr. Thomas Parkins (p. 369.) informs us that he uses moss as a draining for plants in pots, and appears to think the practice new. I beg leave to say that I used the same thing, for the same purpose, as long ago as the spring of 1824; and found it to answer, in every respect, better than the common way of draining pots. Since that time, I have struck pelargoniums in moss; and have grown them in it without any mould at all, and found the plants stronger and better than such as were grown in the regular compost for pelargoniums. As the moss decays at the bottoms of the pots, I press it down, and fill up the pots with fresh moss. It does not signify whether the moss be live or dry, as both will answer equally well. — *John Stewart, Gardener to Alexander Baring, Esq. Addiscombe Place, Croydon, Surrey, Aug.* 20. 1834.

Planting without Nurses. — I am much pleased with Mr. Munro's interesting remarks on the subject of planting (p. 405.). Pray let us have, without delay, his farther hints on the treatment of plants intended to be put out without nurses, &c. — *W. T. Bree. Allesley Rectory, Aug.* 7. 1834.

Some remarkable Specimens of Oak-branches, covered with Acorns, have been sent us by Mr. Bree; who says: — The specimens now sent are not merely accidental ones: on the contrary, the whole tree is loaded, on every branch, in the same manner; and I have one specimen of a cluster (or, rather, a cluster of clusters) comprising thirteen acorns. This is the more remarkable, because the oak is not (as you will perceive) the common species (*Quércus Ròbur*), but *Q.* sessiliflòra; which last is, generally speaking, a much shyer bearer than the *Q. Ròbur.* The present is certainly a very great acorn year; but whether the tree usually bears fruit in more than common abundance, I have not observed. The tree is now really an extraordinary sight: the acorns look like inverted bunches of grapes. — *Idem. Sept.* 4. 1834.

A Specimen of an extraordinarily large Melon, grown in the open air, in the garden of Wm. Hobson, Esq., Markfield, Stamford Hill, has been sent us by his gardener, Mr. Strachan. It measured 2 ft. 2 in. in circumference; and the flavour was excellent, the flesh thick, and the rind very thin. Mr. Strachan says: — "In the year 1831, I received the seeds of the above melon from Mr. Hobson; who, at the same time, read the account of it to me from the letter he had received with the seeds, from a gentleman who had been at the horticultural meeting at Manchester, in 1819. From this gentleman's description of the melon (which, he said, took the prize), it was of good flavour, and weighed 15½ lbs. I sowed the seeds in 1831, and treated the young plants the same as my other melons; with this exception, that, instead of putting two plants under one light, I put one only. I planted them in good fresh stiff loam. I cut three melons from one plant; one of which weighed 14½ lbs., and the other two from 8 lbs. to 12 lbs. each: all were of good flavour. This year, I sowed the seeds about the middle of March; and potted the plants singly, in sixty-pots, shifting them from one sized pot to another till the 1st of May; when they were turned out in the open ground, on a south border, with a hand-light over them; and kept close till they began to grow, and nearly filled the light, when a little air was admitted to harden the plants. This was all the protection they received; and, about the month of June or July, the lights were removed entirely, and the plants were suffered to take their own course. The second week in August, I cut one fruit which weighed 16½ lbs., and which was the only one that I suffered to remain on that plant. About ten or twelve days after, I cut from another plant three melons, weighing from 10 lbs. to 12 lbs. each; one of which I cut up in the presence of Mr. Blair and a few more of my neighbours, and which was well flavoured: in fact, it was much better than any of us expected. I have cut several since that time, which have not been quite so good; which I attribute to the cold frosty nights, and the lateness of the season. — *James Strachan. Markfield, Stamford Hill, Sept.* 27. 1834.

Effects of the prolonged Summer — A second crop of whortleberries (*Vaccínium* Myrtíllus) has ripened at Edgworth Moor in Lancashire. Fine ripe figs were grown in the open air against a wall in Aberdeen. Pear trees, in the gardens of Sir T. G. Cullum at Hardwicke House, in Suffolk, have produced fruit on the young spring shoots of the present year, which flowered at Michaelmas: the pears are of the Passe-Colmar and Marie Louise kinds. A fig tree on the same property has its second crop perfectly ripe. At Elmswell, in the same county, one tree, which has already produced two crops of apples, is in bloom for the third. In York, white currants, fully ripe, were gathered in a garden opposite the Pavement; and at Scarborough Parade, large strawberries have fully ripened, notwithstanding the exposure of the situation to the sea breeze. The gardens and fields near Sheffield present all the appearance of spring; flowers and plants having blown and borne fruit a second time. The Inverness woods have yet scarcely lost a leaf; and are only here and there beginning to assume their autumnal livery. A pear tree in a garden near Huddersfield, which had lost nearly all its leaves, has budded forth again in freshness and full blossom. At Coleridge, in Devonshire, the apple trees have ripe fruit and full flower blossoms at the same time. (*Morn. Chron.* Oct. 17. 1834.) About London the weather was so fine during the last fortnight of September and the first fortnight of October, that the six and sometimes eight artists whom we had employed, during the whole of that period, in the Horticultural Society's garden, Messrs. Loddiges' arboretum, and in various nurseries, making drawings of trees and shrubs for our *Arboretum Britannicum*, did not meet with a single day's interruption till the 15th of October, when portraits of all the deciduous trees and shrubs were completed. The evergreens will probably occupy them a month or two longer, as the weather can hardly be expected to continue such as to allow of drawing every day in the open air.

Passiflòra [? Cockbúrnii].— Stem quadrangular; leaves ovate, large, and bright green; petioles with two glands, seldom four; stipules lanceolate, pointed, subserrate; involucrum large, three-leaved, serrated; calyx lanceolate, slightly keeled and spined on the back. Colour of the flower: inside, dark maroon on the edges of the petals and calyx, shaded to light in the centre; outside, purple on the edges of the petals, shaded to very light in the centre; calyx green; rays with dark brown ribs gradually terminating with light lilac, and curling inwards. Seed from South America. Blossoms here, in a green-house, in September; increased freely by cuttings. — *James Cockburn. Guernsey, Oct.* 2. 1834.

ART. VI. *Retrospective Criticism.*

PRIZES for Specimens of Flower-Painting done by Ladies (p. 451.). — The Devon and Exeter Floricultural Society is reported to have introduced a very interesting subject for competition into the flower shows, "by offering a prize for the best specimen of flower-painting done by a lady." Much interest has been excited here by a similar proceeding for some years past; and it is to be hoped that these examples may stimulate other societies to offer similar rewards, thus encouraging the exercise of a talent highly useful and agreeable in itself, as well as pleasing and beneficial in the perpetuation of a knowledge of varieties and species of plants that otherwise might become, in their locality, extinct. — *S. Saffron Walden, April* 15. 1834.

We wish we could see prizes offered to the young gardener for the best-drawn plans of parks and gardens, or sketches of trees, &c. — *Cond.*

The Successors of the late Mr. Weare, Nurseryman, Coventry. — In p. 165., while recommending Kirke's nursery, at Coventry, we have, among other things, stated that he had been "very ill used by his late employers, Weare's successors." We stated this on the authority of a most respectable gentleman, one of our correspondents, residing in the neighbourhood of Coventry; and not from any personal knowledge of these successors, of whose very names we were ignorant, till a letter from one of them was lately shown to us, stating that they had not used Mr. Kirke ill. According to that letter, they certainly have not done so; and we therefore insert this paragraph in order to express our regret that we should give publicity to a report likely either to injure them, or to hurt their feelings. — *Cond.*

Mr. Calvert's Nursery at Rouen. (p. 428.) — Mr. Garvie was discharged from my establishment about six years ago, and he has never put his foot in my gardens since that period. The whole of his assertions are false. He says my nursery is all gone to wreck; an event that he had long expected. This might have been the case, if I had suffered it to be cultivated by the English gardeners that I have had over; for my establishment never suffered but when conducted by them. The fact is, that my garden was never in better prosperity than it is at present; and that what Mr. Garvie calls a wreck was never so well in flower as at this moment. I have thought it prudent, in order to give his assertion a direct negative, to send you three newspapers and one review, all published, within the last month, at Rouen; and I hope you will, in justice to me, translate those parts that will prove that my gardens are not a wreck; and that my family and self are respected by the press and inhabitants of Rouen. The date of the first of these newspapers is August 28. 1834, and it is called *L'Echo de Rouen;* the second is the *Gazette de Normandie*, and is dated September 8. 1834; the third is the *Clochette*, and is dated September 21. 1834; and the review is called the *Revue de Rouen*, for this month. All of these I beg of you to keep, that the readers of your Magazine may at any time see them. I accompany these papers with four certificates from four of the workmen now in my employ, to contradict the assertion that my men were obliged to leave for the want of their wages being paid them. The first of these certificates is signed by Vincent, who states that he has been thirteen years in my service, and that William Garvie has never been in the garden since he left. The second is from Mallet, a workman who states that he has been nine years in my service, and that Garvie sent for him to a *café* near my establishment, and that he took a glass of *eau de vie* with him; but that he did not enter the garden. The third is from L'Enfant, a gardener, who has been six years in my service; and the fourth is from Hardy, who states that he has been three years in my service as a gardener. I have nine persons daily occupied; not one of whom has been less than twelve months with me. So much for the assertion about the men not being paid, and that no one would stay with me. These certificates also contradict the assertion which says, "I was sorry to see such a fine nursery as this was," &c., p. 429. Now, the fact is, that Garvie has not seen my nursery for these six years: and I will give you another proof, if any more are wanted, by referring you to Mr. Salter of Shepherd's Bush, who, when he saw Garvie's statement, kindly offered to write a letter to you, which he has done, and begs of you to publish it. This letter contradicts *in toto* all Mr. Garvie's tissue of falsehoods. The property I hold and occupy as a nursery was given by the government to the town of Rouen to create a garden of plants: but with the condition that the corporation should indemnify me. They have already paid me 27,000 francs on account; the remainder to be paid upon my giving up possession. I can remain two years longer; but I may leave this year, if I arrange with the town. At all events I shall not leave Rouen. I am much flattered by the greater part of the members of the corporation wishing me still to remain at Trianon, and cultivate the gardens for the town.

In my nursery, at this moment, there are from eight to ten thousand georginas, several thousand roses, from three to four thousand camellias, from two to three thousand pelargoniums, and several thousand plants in pots, and containing every thing new which I have been able to obtain. If this is to be considered as the wreck of a horticultural establishment, what would your correspondent consider enough to complete a nursery? I am satisfied that I have too many plants; and I should be very happy to have less, as nothing would please me better than to find purchasers for them. — *W. C. Calvert. Trianon, Rouen, Sept.* 27. 1834.

Extract from Mr. Salter's Letter. — In passing through Rouen, about three weeks since, I visited the garden of Mr. Calvert; and can take upon myself to state that what Mr. Garvie asserts respecting it is not the case; also that any person passing through Rouen may see at the Trianon, among other plants, the finest collection of georginas in France. — *John Salter. Shepherd's Bush, Sept.* 24. 1834.

The certificates referred to by Mr. Calvert are left with us, and also the newspapers and the review. All the latter praise the collection of georginas at the Trianon, but at such length that we cannot afford room for translations.

The Advantage of "Cutting off young Oaks close to the Ground two or more Years after they are planted," I am well acquainted with; though Mr. Lawrence doubts (p. 465.) whether I adopt the plan. I love oaks dearly, young or old, thriving or in decay; and plant and encourage them more than most men in my sphere. — *W. T. Bree, in a letter dated Sept.* 4. 1834.

Tobacco in Ireland. (p. 503.) — In the quotation from Mr. Wilson's article on tobacco, published in the *Hort. Trans.*, the culture of tobacco in Ireland is spoken of as being still continued. This is not the case. The culture of tobacco in Ireland is now prohibited; and the native stock was bought up by government, and burnt. — *R. London, Oct.* 1834.

Smith's Treatise on the Growth of the Cucumber, Mushroom, &c. (IX. 692.) — Having this season grown both cucumbers and mushrooms according to the directions laid down in that work, I deem it but justice to the author to state the result of my experience. On the 1st of February I built my succession bed for cucumbers, and on the 8th of that month ridged out my plants; and I must say, candidly speaking, never did I, through all my long experience, see plants grow with such facility. They have answered my most sanguine expectations; the fruit, from the first to the present time, has been exceedingly fine. With the mushrooms I proceeded precisely in the manner prescribed by Mr. Smith; and the result was, that, as near as possible to the time he mentions, my first mushroom began to appear. The first time I cut, I gathered forty; the second time, twice that number; and the third time, nearly a bushel; the bed continuing to yield in the same proportion to the beginning of May last. Rhubarb, sea-kale, and asparagus, I have, myself, had no opportunity of cultivating as directed; but I have lately seen it grown on the same principle, and feel confident that it is fully practicable. From the plain and simple rules laid down in Mr. Smith's very useful work, I am fully persuaded that any person giving them proper attention will insure success. In justice to the author, I shall feel obliged by your giving this letter insertion. — *W. Redyer, Practical Gardener and Florist. Beccles, Suffolk, Aug.* 21. 1834.

The Curl in the Foliage of the Potato. (p. 433.) — At the time I was a boy, the plants of potatoes of the red-nosed kidney kind were, in this village, so much subject to the curl, for several years, that we (all the gardeners) were afraid that we should wholly lose the kind. We pursuantly got seed from healthy plants from Soham, a village some miles distant, and since that time I have seen but very little of the curl here. Changing the seed is the best remedy for the disease. My plants from the potatoes of the red-nosed kidney kind from Aberdeen (p. 437.), which you sent me, have been unhealthy with the curl, but I expect a healthy crop from them next year. — *J. Denson, sen. Waterbeach, near Cambridge, Sept.* 17. 1834.

Art. VII. *Queries and Answers.*

Cèreus speciosíssimus. — I understand that this splendid plant can be made to bloom twice a year; but not having heard how this is to be done, I should be greatly obliged if any of your readers would contribute the desired information through your pages. — *A Subscriber. Doncaster, Aug.* 4. 1834.

A Double-Flowered Crocus: is such a Thing known? — In p. 213. mention is made of double crocuses: are there such things, or is it a mistake? I never before heard of double crocuses, and have often wondered, considering how much crocuses are cultivated, that no such thing had been met with. They must be exceedingly beautiful: where are they to be had, if they really do exist? — *W. T. Bree, in a letter dated August* 7. 1834.

The words "hepaticas, single and double crocuses," in p. 213., line 19. from the bottom, are, doubtless, erroneously put for "hepaticas, single and double; crocuses." I have never known of a double-flowered crocus, but once saw a crocus flower, if not two, in which there were six stamens, but they were not accompanied by more than the usual number (six) of segments of the perianth or corolla: the flower was, if I have rightly remembered, of the common species, Crócus lùteus *Lam.* — *J. D.*

The Shaddock and the Mango. (p. 466.) — It was only yesterday that I observed a question addressed to myself by Mr. Roberts of York, on a subject which appears to me no less marvellous than it very naturally does to him, and I lose no time in replying to it as far as I am able. Horticulture, in all the British settlements which I visited, during a sojourn of many years in the West Indies, appeared to be at the lowest possible ebb; and a planter's garden, like the sign-dauber's black bear or golden lion, required a printed notice to warn you that it was not a wilderness, so little did it wear of the appearance of art, and so utterly guiltless was it of any thing approaching to science, or even neatness; the plants being left to luxuriate in all the wantonness of nature; that is, if they escaped being overpowered by weeds of rank luxuriance during the rainy seasons. Hence you may readily suppose it never was my good fortune to witness any horticultural experiments beyond the quarterly pruning of the grape vines which frequently shaded the trellis porch of some planter's house, of more than an ordinary turn for experiment; and by the judicious exercise of which he was enabled, as I have, I believe, acquainted you in former letters, to obtain four crops of grapes annually from one vine; and as I was not myself the possessor of so much as one inch of ground, either as proprietor or even tenant, I had no opportunity of trying any experiments. The shaddock has hitherto been regarded by botanists, and I should presume upon sufficient grounds, from the days of Linnæus to the present, as a distinct species of Cítrus (*C.* decumàna), of which the forbidden fruit, grape fruit, and several others, are supposed to be accidental varieties. Hence it need not be a matter of surprise that from the seeds of a shaddock we should have more or less of these varieties, as well as genuine shaddocks; and it is equally *possible*, although I cannot pretend to any acquaintance with the fact, that, by a kind of natural hybridisation, effected by insects, hybrid varieties of shaddock, more or less approaching to oranges or lemons, according to the nature of the male parent, *may* have sometimes arisen: but, never having heard of such an occurrence, which, if familiar to the planters, would not have been suppressed during any of the years, or in any of the islands, of my residence (and they were not a few), I should be much disposed to rank the tale among Lewis's Tales of Wonder; and to class it with the fable of English apple seeds producing, when sown within the tropics, guava shrubs in place of apple trees; or the wonderful history of the vegetable fly given by Attwood in his *History of Dominica*, and gravely copied from that work by the credulous Edwards into his *History of the British West Indies*, which, for the amusement of your readers, I shall transcribe; as Attwood's work (a volume containing, notwithstanding his credulity in this respect, much correct and useful information) is little known. "The vegetable fly is a remarkable insect. It is of the appearance and size of a small cockchafer, and buries itself in the ground, where it dies, and from its body springs up a small plant, which resembles a coffee tree plant, only its leaves are smaller. The plant which springs from this insect is often overlooked, from the supposition people have of its being no other than a coffee plant; but on examining it properly, the difference is easily distinguished, from the head, body, and feet of the insect appearing at the root as perfect as when alive." (*Attwood's History of Dominica*, p. 69. Lond. 1791.) Mistrusting, however, my own recollections, impaired by an absence of nearly twenty years, I shall mention the subject in my next letter to Dr. Bancroft, and communicate his answer to you, for the information of your correspondent. As to the fact of the vast varieties of mango to be found in the West Indies, I can speak with confidence, nor can it be a matter of any surprise to those acquainted with the rude state of horticulture, or rather of no horticulture, which prevails in all the English islands; and which extends, as far as my recollection goes, to the Danish and Haytian territories I visited. The French planters form in some degree an honourable exception to the general rule; and their gardens exhibit something like *traces* of culture; but still no artificial methods are adopted of improving the varieties of fruit, or perpetuating those improved varieties which Nature in her caprices constantly and spontaneously offers for acceptance. Even the pine apple, the mammee apple, the sugar apple, and the custard apple, *multis cum aliis*, which might, no doubt, be much improved, grow wild and neglected; and the guava, alike delicious for its fruit and for its jelly, is planted, like our brambles, only by the roadsides and in the hedges. The cashew apple, which by a simple and easy process affords abundance of the most palatable and wholesome wine, is equally neglected; for hitherto rum and sugar, and sugar and rum, have absorbed every thought, and exclusively called forth every exertion. May we hope that the reformed system, which has at last happily commenced, will bring with it better things; awaken the planters, so long slumbering on the verge of ruin, to a sense of their true interests; and convert the West Indian Islands, from a fatal millstone about the neck of Great Britain, into what a bountiful Providence designed they should be, a terrestrial paradise, and a source of benefit to the parent state. This is a consummation I have incessantly laboured to effect, by calling the attention of those most interested to the true capabilities of those mismanaged and comparatively unproductive regions; but acting at a distance, and by such agency only as chance throws in my way, it can hardly be a matter of surprise that my unaided labours have been in a great degree abortive. I have, however, the satisfaction to believe that the foundation stone of rational improvement has been laid; and that the completion of the superstructure, though perhaps tardy, will be certain. — *W. Hamilton.* 15. *Oxford Place, Plymouth, Sept.* 16. 1834.

Loudon's Seedling Grape. — In your account of what has been lately done in the Caledonian Horticultural Society's garden at Edinburgh, there appears Mr. Barnet's report of certain grapes which he has had under culture. Among others he mentions "*Loudon's Seedling;*" of which it is stated that "it readily produces a second crop." Pray be so good as ask our friend Barnet, from what part of the vine the second crop is produced. — *J. M.* 6. *Union Row, Chelsea, Aug.* 23. 1834.

What is the best Method of preserving Celery through the Winter? — I shall be greatly obliged by this information, that article being in daily demand in the family with whom I live. — *A Subscriber. Doncaster, Aug.* 4. 1834.

Hop Poles and Copper Wires. — Will you or Mr. Murray have the goodness to inform me how that gentleman (VII. 332.) means the copper wires to be fixed to the hop poles? Does he mean along the top of the poles horizontally, and one turn round each pole to keep the wire in its place? Is wire one tenth of an inch in diameter thick enough? Do you approve of three poles to each plant, instead of one, as giving more surface? What is the best time of gathering, and mode of drying; and what is the best publication on the culture and management of the hop? — *O. P. Q. Carlow, Aug.* 2. 1834.

Art. VIII. *Covent Garden Market.*

	From			To		
	£	s.	d.	£	s.	d.
The Cabbage Tribe.						
Cabbage, per dozen:						
White - - -	0	0	6	0	0	8
Red - - -	0	1	0	0	1	6
Plants or Coleworts -	0	0	8	0	1	0
Broccoli, per bunch:						
White - - -	0	1	0	0	1	6
Purple - - -	0	0	6	0	1	0
Cape - - -	0	0	6	0	1	0
Legumes.						
Kidneybeans, per half sieve	0	1	3	0	2	6
Scarlet beans, per half sieve	0	1	0	0	1	6
Tubers and Roots.						
Potatoes - per ton	3	0	0	5	0	0
Potatoes - per cwt.	0	2	0	0	3	0
Potatoes - per bushel	0	1	3	0	1	9
Jerusalem Artichokes, per half sieve - -	0	1	3	0	1	6
Turnips, White, per bunch	0	0	1½	0	0	2
Carrots, per bunch - -	0	0	4	0	0	6
Red Beet, per dozen -	0	1	0	0	1	6
Parsneps, per bunch - -	0	0	6	0	1	0
Horseradish, per bunch -	0	1	6	0	3	0
Radishes:						
Red, per dozen hands (24 to 30 each) - -	0	0	8	0	1	0
Turnip, per bunch - -	0	0	1½	0	0	2
The Spinach Tribe.						
Spinach per sieve -	0	1	0	0	1	6
Spinach per half sieve -	0	0	9	0	1	0
Sorrel, per half sieve - -	0	0	9	0	1	0
The Onion Tribe.						
Onions, old, per bushel -	0	1	9	0	2	6
For pickling, per half sieve	0	1	6	0	2	6
Green (Ciboules), per bunch	0	0	2	0	0	3
Spanish, per dozen -	0	0	4	0	0	6
Leeks, per dozen bunches -	0	0	9	0	1	3
Garlic, per pound - -	0	0	6	0	0	8
Shallots, per pound - -	0	0	8	0	0	10
Asparaginous Plants, Salads, &c.						
Lettuce, per score:						
Cos - - -	0	1	0	0	1	6
Cabbage - - -	0	0	4	0	0	9
Celery, per bundle (12 heads)	0	0	9	0	1	6
Salads, per punnet - -	0	0	2	0	0	3
Pot and Sweet Herbs.						
Parsley, per half sieve -	0	1	0	0	1	6
Tarragon, per dozen bunches	0	4	0	0	6	0
Fennel, per dozen bunches	0	1	6	0	2	0
Thyme, per dozen bunches	0	2	0	0	3	0
Sage, per dozen bunches -	0	2	0	0	3	0
Mint, per dozen bunches -	0	1	6	0	2	0
Marjoram, per dozen bunches	0	1	6	0	2	0
Savory, per dozen bunches -	0	1	0	0	1	3
Basil, per dozen bunches -	0	2	0	0	3	0
Rosemary, per dozen bunches	0	4	0	0	6	0
Tansy, per dozen bunches -	0	1	0	0	0	0
Lavender, dry, per dozen bun.	0	8	0	0	4	0
Peppermint, dry, per doz. bun.	0	2	0	0	0	0
Stalks and Fruits for Tarts, Pickling, &c.						
Vegetable Marrow, per dozen	0	0	6	0	0	9
Gourds, per dozen - -	0	0	6	0	1	6
Tomatoes, per half sieve -	0	1	0	0	1	3
Capsicums, per hundred:						
Green - - -	0	1	6	0	2	0
Ripe - - -	0	3	0	0	4	6
Chilies - - -	0	0	9	0	1	3
Edible Fungi and Fuci.						
Mushrooms, per pottle -	0	0	9	0	1	3
Morels, per pound - -	1	0	0	0	0	0
Truffles, per pound:						
English - - -	0	4	0	0	5	0
Foreign, dry - -	0	14	0	0	16	0
Fruits.						
Apples, Dessert:						
Ribstons, per bushel -	0	4	0	0	6	0
Downtons, per half sieve	0	2	0	0	3	0
Fearn's Pippin, p. ½ sieve	0	2	0	0	3	0
Nonpareils, per bushel -	0	6	0	0	10	0
Baking, per bushel -	0	3	0	0	4	0
Pears, Dessert, per half sieve:						
Chaumontelles - -	0	7	0	0	10	0
Swan's Eggs - -	0	4	0	0	7	0
Autumn Bergamot -	0	6	0	0	9	0
Bullace, per sieve - -	0	4	0	0	5	0
Blackberries, per half sieve	0	1	6	0	2	0
Berberries, per half sieve -	0	2	0	0	3	0
Elderberries, per bushel -	0	4	0	0	6	0
Myatt's Strawberries, p. pun.	0	4	0	0	5	0
Keen's Seedlings - -	0	2	6	0	3	0
Raspberries - - -	0	1	6	0	2	6
Walnuts per bushel -	0	8	0	0	10	0
Walnuts per hundred -	0	2	0	0	3	0
Filberts, per 100 lbs. - -	5	0	0	6	0	0
Cob nuts - - -	5	0	0	5	5	0
Hazel nuts, per peck -	0	4	0	0	5	0
Pine-apples, per pound -	0	5	0	0	10	0
Grapes, per pound:						
Hot-house - - -	0	0	9	0	2	6
From the wall - -	0	0	4	0	0	6
Hamburgh Black - -	0	1	0	0	1	3
White - - -	0	0	9	0	1	0
For wine, per 112 lbs. -	0	15	0	1	0	0
Melons, each - - -	0	3	6	0	5	0
Cucumbers, Pickling per hundred -	0	0	9	0	1	0
Cucumbers, Pickling per brace -	0	1	0	0	1	6
Oranges per dozen -	0	0	0	0	3	0
Oranges per hundred -	1	0	0	1	10	0
Lemons per dozen - -	0	1	0	0	2	0
Lemons per hundred -	0	6	0	0	14	0
Dates - - -	0	1	0	0	2	0
Sweet Almonds - -	0	2	0	0	2	6
Brazil Nuts, per bushel -	0	0	0	0	16	0
Spanish Nuts, new, per peck	0	0	0	0	5	0
Barcelona Nuts, per peck -	0	0	0	0	5	0

Observations. — Throughout the preceding month the weather has been particularly favourable to the growth of vegetables, with which the market has been fully and steadily supplied. From the continued fineness of the season, London has been in a measure deserted by all whose time or convenience would allow them to remain in the country, which at all times makes a difference in the demands of the London markets. The price of almost every thing now supplied has been very moderate, but is improving steadily, though very slowly. The prevalent dry and hot weather for the last three or four weeks will cause a less abundant supply for the next three months than has been anticipated, from which a farther improvement in prices may be expected. Potatoes are in most abundant supply, and those of inferior quality very low in price, so as barely to pay freight and charges. The stock immediately about London is now nearly brought to market, but we are already well supplied from the more distant counties by water. Onions are in abundance, of good quality; carrots very plentiful and good, now fit for storing; turnips good, and moderate in price; coleworts plentiful; savoys coming to market abundantly. Broccolies are not yet supplied freely, or of good quality; but the recent change in the temperature is favourable to their improvement. Late cauliflowers come to hand sparingly: the great heat of the summer has been unfavourable to them. The supply of apples is still very large, but great complaint is made that they have a tendency to decay, and cannot be preserved: this may account for the supply, but will cause them to be ultimately scarce. Our crop of pears has altogether failed: we have had a considerable supply from Jersey and Guernsey, which are excellent. The fruit from these islands is entered free of duty, consequently can be obtained at very little expense beyond the purchase there; but their fine fruits are so much in demand as to realise very extraordinary prices. Filberts are now nearly exhausted; the prices are double what they were. Chestnuts are very plentiful and excellent. During the present month, from the extreme openness and fineness of the season, we have had abundance of violets; also lavender in full bloom. The second crop of Myatt's new pine-apple strawberry is very good, and considered equal in flavour to those in full and regular season. Keen's seedling also very good; with a small quantity of the old, or double-bearing, raspberry. — *G. C. Oct.* 21. 1834.

Art. IX. *London Horticultural Society and Garden.*

August 19. 1834. — *Presented.* A copy of a work entitled, An Enquiry into the Fruitfulness and Barrenness of Plants and Trees, with Practical Instructions for the Management of Gardens and Farms, and a System of training Fruit Trees, &c.; founded upon Scientific Principles: arranged as a Dialogue, by the Author, Joseph Hayward, Esq.

Read. A communication on the propagation of pinks without the aid of glass, by Mr. William Phelps.

Exhibited. Royal muscadine, black Hamburgh, and flame-coloured Tokay grapes, from Mr. J. Duncan, gardener to William Whitbread, Esq. An instrument for taking up strawberry runners, by Mr. Peter Orlando Hutchinson, of Watton, near Stone, Staffordshire. Two boxes of flowers of georginas, from W. Dennis and Co. Flowers of a collection of varieties of georginas, from Messrs. Chandler. Royal George and téton de Venus peaches, and Black Prince grapes, from Mr. C. Spong. Wheatear carnations, and apples of the kinds, Carlisle codlin, Kentish codlin, Kerry pippin, Nonesuch, Hawthornden, summer July flower, and one nameless kind, from Mr. J. Kirke. A collection of flowers of varieties of roses, and flowers of other plants, among which were an undescribed species of Dracocéphalum from Peru, Lophospérmum Rhodochìton in great beauty, *C*lèthra arbòrea, &c., from Mrs. Marryat.

From the Society's Garden, flowering specimens of Quisquàlis índica, *L*ílium longiflòrum, Magnòl*ia* grandiflòra var., Zínn*ia* élegans coccínea, China asters, roses, *T*hryállis brachýstachys, Chelòne centranthifòlia, *V*erbèna venòsa, Silène laciniàta; Phlóx tardiflòra, cordifòlia, acuminàta; *H*ibíscus syrìacus, varieties of; *D*elphínium cheilánthum flòre plèno, and of other plants. Elruge and violette hâtive nectarines; grosse mignonne, noblesse, George the Fourth, Royal Charlotte, Royal George, and Bellegarde peaches. The peaches and nectarines are about three weeks earlier than usual. It appears that the George the Fourth peach is capable of being grown to a larger size than has hitherto been represented. Oslin, summer Thorle, Borovitsky, summer golden pippin, Tetofsky, and summer rose, apples. These are very good summer table apples. The Oslin and summer Thorle are Scotch apples. The Oslin was supposed to have been brought by the monks to the abbey of Arbroath: however this might be, it has not been found among any of the foreign collections in the garden. The Tetofsky has been received to the garden from M. Call of the Taurida Gardens.

Sept. 16. 1834. — *Exhibited.* Flowers of twenty-eight varieties, and of four seedling varieties, of georginas, from Messrs. Chandler.

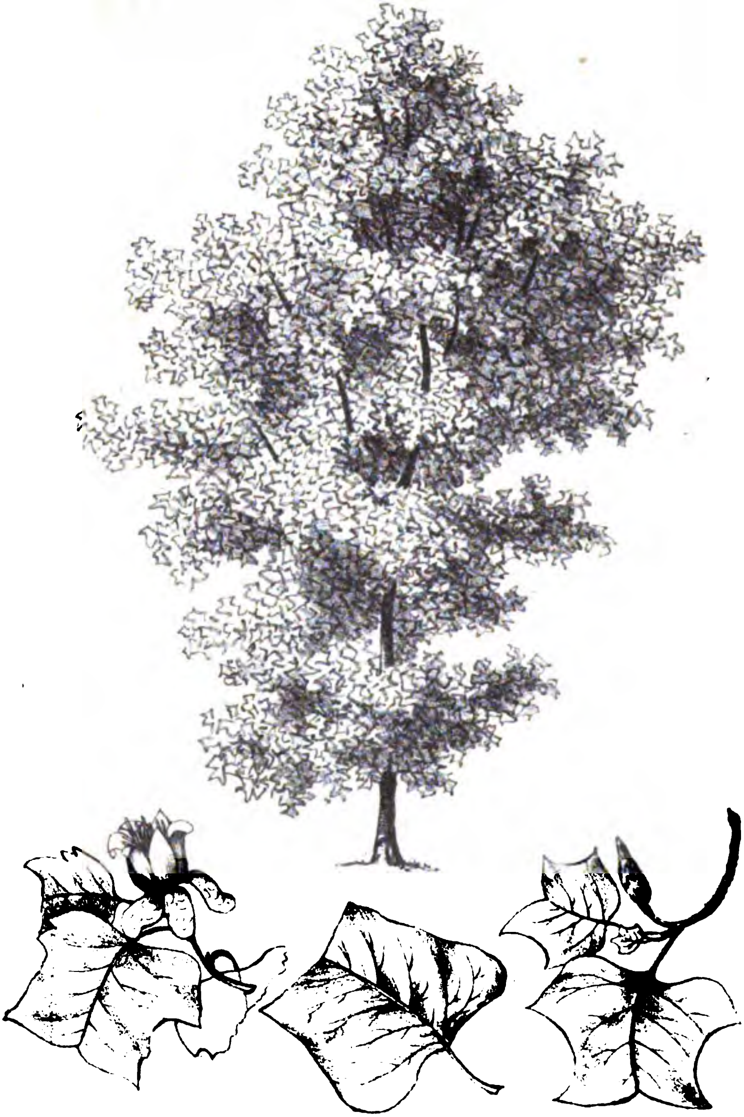
From the Society's Garden. Flowers: Gesnèr*ia* pendulìna; Amarýllis *Belladónna*, and light-coloured-perianthed variety; Hunnemánn*ia* *f*umariæfòlia; *S*álvia angustifòlia, pseùdo-coccínea, and *c*hamædryöìdes; Calceolària viscosíssima, *A*ristolòchia chiloénsis, Desmòdium nùtans, Psoràlea sp. (Douglas), Seedling fuchsias, China roses, China asters, Georginas. Fruit. Apples: Autumn pearmain, Cambusnethan pippin, Hawthornden, Wormsley pippin, Kentish fillbasket, Ribston pippin, Foxley, De Lande, yellow Ingestrie, Strode House pippin, Longville's kernel, scarlet queening, scarlet pearmain, Waltham Abbey seedling, Nelson. Pear: reine des poires.

Oct. 7. —*Books presented.* From the list, we quote these: — Sixième Notice sur les Plantes rares cultivées dans le Jardin de Genève, et une Notice sur quelques espèces des Cactées; presented by the author, M. A. Decandolle. The Botany of the County of Sussex; presented by the author, T. H. Cooper, Esq.

Exhibited. Plums: Ickworth Impératrice, and Dunmore, from T. A. Knight, Esq. Apples, from E. Barnard, Esq., of the following kinds: — Alexander, weight 17 oz.; Shepherd's fame, 12 oz.; Hollandbury, 14 oz.; King of the pippins, 10 oz.; Coster, 17 oz.; Seek no further, 18¼ oz. Beurré Diel pears, from Lord Farnborough, 20 oz. Double-bearing raspberries, from Mr. J. Kirke. *L*ithospérmum angustifòlium, and *Tacsònia* pinnatistípula, from Mrs. Marryat. Flowers of georginas, from Messrs. Chandler, Vauxhall; and flowers of twenty-four varieties, from Mr. Hogg, Paddington.

From the Society's Garden. Flowers: Escallòn*ia* montevidénsis; Calceolària Herbert*iàna*, angustifòlia, angustiflòra, and viscosíssima; Gíl*ia* trícolor, Stenáctis speciòsa, Collíns*ia* bícolor; *S*álvia angustifòlia, spléndens, Grahàmi, and *c*hamædryöìdes; Diplopáppus incànus, Desmòdium nùtans, Zínn*ia* élegans coccínea, French marigold, China roses, georginas, seedling georginas, and anemone-flowered georginas. Fruit. Kitchen apples: Waltham Abbey seedling, drap d'or, Burns's seedling (a very handsome kitchen apple; and, in spring, may also be used as a table apple), beauty of Kent, De Lande, Wormsley pippin, Silverling (a large Dutch apple), mère de ménage, Bedfordshire foundling, Rambour. Table apples: Old pomme roy (perhaps, more properly, a kitchen apple; but some esteem it as a table one: trees bear abundantly), king of the pippins, Broughton, pomme de neige, Famagusta, Downton, white paradise. Pears: Duchesse d'Angoulême (from a wall. The Duchesse d'Angoulême has, this year, borne good crops in the neighbourhood of London, when most other kinds have greatly failed; although, in some better pear seasons, this sort blossoms abundantly, but often fails in setting: a fault which may, however, diminish as the trees get older, and have, consequently, a steadier flow of sap), white doyenné (from a wall), beurré de Capiaumont, moorfowl egg, verti longue panachée. Grapes from the open air: esperione, royal muscadine, Cambridge botanic garden, Miller's Burgundy, Pitmaston white cluster. Winter Colman apple, from Mr. G. Lindley, C.M.H.S.

Liriodéndron Tulipifera. 15.



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THE
GARDENER'S MAGAZINE,
DECEMBER, 1834.

MISCELLANEOUS INTELLIGENCE.

ART. I. *Arboretum Britannicum; or, Portraits, to a Scale of a Quarter of an Inch to a Foot, of all the Trees which endure the Open Air in Britain, of Ten Years' Growth, drawn from existing Trees within Ten Miles of London; with Botanical Specimens of the Flowers and Fruit, or Seeds, of each Tree, to a Scale of Two Inches to a Foot, &c. &c.*

WITH the present Number we give a specimen plate of this work; and in the margin of p. 582. we give a form as the model of a return paper, which any gardener may transfer to a sheet of letter-paper, and, by measuring the trees under his care, fill up, and send us. We have sent papers of this kind, in French, German, and Italian, to all the botanic gardens of Europe; and, in English, to North America, and to upwards of a thousand country seats in Great Britain and Ireland: but still there must be some hundreds of English gardeners who have trees worthy of notice under their care; and the object of this article is to attract their attention, and put them on an easy mode of supplying us with the information we want. We are particularly desirous that they should bear in mind, that we are much less anxious to ascertain the dimensions, &c., of old trees (though these we wish also), than of young trees, and especially of foreign ones, which have been from eight to ten years planted. One great object which we have in view is, to prove, by facts from every part of the country, the extraordinary growth that may be made by trees during the first ten years after planting, when the soil has been properly prepared, and proper room allowed to them; and, consequently, what every planter who expects to live ten years may have just expectations of seeing as the result of his labours. The particulars for the following list of trees, intended to be contained in our first three Numbers, or for such of them as may have come under the notice of those who send, should be received by us in the course of the month of December: —

1. *Magnòlia grandiflòra.*
2. *Magnòlia grandiflòra ferrugínea.*
3. *Magnòlia grandiflòra exoniénsis.*
4. *Magnòlia glaúca.*
5. *Magnòlia glaúca Thompson*iàna.
6. *Magnòlia tripétala.*
7. *Magnòlia macrophýlla.*
8. *Magnòlia auriculàta.*
9. *Magnòlia pyramidàta.*
10. *Magnòlia acuminàta.*
11. *Magnòlia cordàta.*
12. *Magnòlia conspícua.*
13. *Liriodéndron Tulipífera.*
14. *Liriodéndron Tulipífera obtusíloba.*
15. Tìlia *europæ'a.*
16. Tìlia *europæ'a glaúca.*
17. Tìlia *rùbra.*
18. Tìlia *argéntea.*
19. Tìlia *platyphýlla.*
20. Tìlia *platyphýlla mìnor.*
21. Tìlia *platyphýlla laciniàta.*
22. Tìlia *pubéscens.*
23. Tìlia *laxiflòra.*
24. Tìlia *álba.*
25. Tìlia *parvifòlia aúrea.*
26. A'*cer tatáricum.*
27. A'*cer monspessulànum.*
28. A'*cer striàtum.*
29. A'*cer barbàtum.*
30. A'*cer spicàtum.*
31. A'*cer opulifòlium.*
32. A'*cer campéstre.*
33. A'*cer Pseùdo-*Plátanus.
34. A'*cer macrophýllum.*
35. A'*cer* platanöides.
36. A'*cer* platanöides *laciniàtum.*
37. A'*cer sacchárinum.*
38. A'*cer hýbridum.*
39. A'*cer rùbrum.*
40. A'*cer eriocárpum.*
41. Negúndo *fraxinifòlium.*
42. Negúndo *fraxinifòlium críspum.*
43. *Æ'sculus Hippocástanum.*
44. *Æ'sculus glàbra.*
45. *Æ'sculus ohiénsis.*
46. *Æ'sculus cárnea.*
47. *Æ'sculus pállida.*
48. *Æ'sculus macrocárpa.*

	Generic and Specific Names.
	Reputed Age, or Number of Years planted.
	Height as a Standard.
	Height against a Wall.
	Diameter of the Trunk, at 1 ft. from the Ground.
	Diameter of the Space covered by the Branches.
	Shape of the Head; as whether round, oval, compact, loose, regular, or irregular.
	Soil; and whether trenched and prepared, or not prepared.
	Substratum.
	Probable Height in Ten Years.
	Name of the Place where the Tree grows.
	Situation and Exposure, General Remarks, and any of the other Particulars enumerated in the *Gard. Mag.*, No. LVI. p. 562., and p. 563.

ART. II. *Floricultural and Botanical Notices of newly introduced Plants, and of Plants of Interest previously in our Gardens, supplementary to the latest Editions of the "Encyclopædia of Plants," and of the "Hortus Britannicus."*

Curtis's Botanical Magazine; in monthly numbers, each containing eight Plates; 3*s.* 6*d.* coloured, 3*s.* plain. Edited by Dr. Hooker, King's Professor of Botany in the University of Glasgow.

Edwards's Botanical Register; in monthly numbers, each containing eight plates; 4*s.* coloured, 3*s.* plain. Edited by Dr. Lindley, Professor of Botany in the London University.

Sweet's British Flower-Garden; in monthly numbers, each containing four plates; 3*s.* coloured, 2*s.* 3*d.* plain. Edited by David Don, Esq., Librarian to the Linnæan Society.

"THE *indefatigable Drummond*, the assistant naturalist in Capt. Sir John Franklin's overland expedition, bids fair to make as valuable botanical collections in the extreme southern territories of the United States as he did in the British possessions in North America. From Louisiana, whence, among other interesting plants, he has added to our gardens the rare Nuttáll*ia* *P*apàver and Sarracèn*ia* psittacìna, he has entered the province of Texas; and from the embouchure of the Rio Brazos, and from San Felipe de Austin in the interior, he has sent very valuable despatches, both of the animal and vegetable productions." (*Dr. Hooker*, in *Bot. Mag.*, t. 3361., Nov. 1834.)

POLYPETALOUS DICOTYLEDONOUS PLANTS.

XV. *Magnol*iàceæ.

3488. *TALAU'MA.* (The vernacular name of the South American species.) 13. 6. Sp. 3.—
Candóll*ii* Blume Decandolle's ❀ □ fra 15 f.mr Crea.Taw Java 1827. L p.l Bot. reg. 1709
Magnòl*ia* odoratíssima *Reinwardt.*

See p. 565. Its flowers perfume the air with so delicious an odour, that the very Javanese cultivate it. In Europe it is a tender stove plant, increased only by inarching upon Magnòl*ia* (*Talaúma* Blume) pùmila, or by layers, or by having a pot of earth fastened round a wounded branch. (*Bot. Reg.*, Nov.)

"Dr. Blume has ascertained Magnòl*ia* pùmila to be also a *Talaúma.*" (*Bot. Reg.*, Nov.)

The blossoms of this compact little evergreen shrub are also very fragrant: they are rather freely produced in our stoves.

XXVI. *Bombàceæ.*

2030. ERIODE'NDRON 13146 anfractuòsum
2 caribæ'um *Hook.* Caribbean ♆ □ tm 70 Crea.R W. Indies 1739. S p.l Bot. mag. 3360
E. caribæ'um *Hort. Brit.* No. 18148.

A tree, a native of the West Indies; but the interesting figures and description of it published (*Bot. Mag.*, Nov.) have been prepared from living plants of it cultivated in Madeira. Here it thrives; and is esteemed a very interesting object, in its straight slender stem clear of branches to a considerable height, its spreading head of nearly horizontal branches, its large digitate leaves, and its flowers produced towards the ends of the branches. These are about the size of those of the tulip tree; conspicuous, handsome, fragrant, and honey-bearing: the petals are of a delicate pale primrose or cream colour, with the part a little above their base of a deep purplish red.

XLIII. *Philadélphcæ.*

DEU'TZ*IA* Thun. (Named, by Thunberg, after *John Deutz*, sheriff of Amsterdam, &c.; who was one of the gentlemen by whose assistance that botanist was enabled to prosecute his researches in Japan.) 10. 3. Sp. 1.—
scàbra *Thun.* rough-*leafed* ■ or 6 ? my W Japan 1833. C co Bot. reg. 1718

Introduced, in 1833, by J. Reeves, Esq.; who presented a plant of it to the Horticultural Society. This plant has produced the specimen figured, and supplied the means of the following information: — Deútz*ia* scàbra is a hardy shrub, of small dimensions; which thrives in common garden soil, and may be propagated, without difficulty, by cuttings or layers. "It appears to require to be trained to a stick, as its branches are not stiff enough to stand erect; and it seems to have something of a climbing habit: it is doubtful, however, whether this is not owing to weakness in its cultivated state." The leaves are opposite, in pairs, ovate, acuminate, and serrate; dark green. The flowers are white, five-petaled, not so large as those of a snowdrop; but produced, many together, in numerous clusters at the tips of the branches; and thus, in contrast with the dark-green foliage, render the plant a very ornamental one. (*Bot. Reg.*, Nov.) A figure of this species had just previously been published in part iv. of Royle's *Illustrations of the Botany and other Branches of the Natural History of the Himalayan Mountains, and of the Flora of Cashmere.*

XLVI. *Cácteæ.*

3359. ECHINOCA'CTUS.
oxygòna *Lk. & O.* sharp-angled ꝭ □ gr 1 ... Pa.Ro Brazil 1831? C s l Bot. reg. 1717

The stem is from 10 in. to 1 ft. in height, and nearly 10 in. in diameter at the top. The flowers proceed from the ridges, about the middle of the stem: they are nearly 1 ft. long. Petals of a pale rose colour: those of the specimen figured remained expanded about forty-eight hours. The figure has been derived from the unrivalled collection (late Mr. Hitchen's) of Mr. F. Mackie, Nursery, Norwich. See p. 63. (*Bot. Reg.*, Nov.)

XLVII. *Onagràriæ.*

1183. ŒNOTHE'RA.
Drummónd*ii* Hook. Drummond's ✱ △⌋ or ¼ ? au.s Y Texas 1833. C s.l Bot. mag. 3361

Mr. Drummond has sent the seeds of this and of another species of *Œ*nothèra from Brazosia; both of which have flowered copiously in the Glasgow Botanic Garden. The flower of *Œ.* Drummónd*ii* vies in size and colour with that of *Œ.* macrocárpa, missouriénsis, and grandiflòra. Its stems are decumbent, branched, and succulent. It flourishes in the open air, though a native of Texas. (*Bot. Mag.*, Nov.)

LXXVII. *Leguminòsæ.*

2144. **KENNE'DY*A*.**
19379*a* nígricans *Lindl.* dark-*corollaed* ⊥ └┘ or 3? f.jn D.P.G N. Holland 1832? C s.p Bot.reg.1715

This is the species described, without a specific name, in p. 285. 348. It was raised by Boyd Miller, Esq., of Collier's Wood, near Mitcham, Surrey, from seeds gathered in New Holland by Dr. Nisbet.

1980. **ADE'SMIA.**
Loudònia Hook. & Arnott Loudon's ♣ └┘ or 2 my.jn Y Chile 1832. S p.l Bot. reg. 1720
Loudònia anthylloìdes *Bertero MSS.*, according to Mr. Thomas Bridges, Valparaiso.

For particulars on its habit, and the culture of it, see IX. 484.

2837. **ACA'CIA.**
24817*a* plumòsa *Lowe* feathery-*lfd.* ⊥ □ or 20? Y ... ... C s.l.p Bot. mag. 3366

Figured and described from living specimens in Madeira; but it is conjectured that the species is cultivated there, and has been derived from some other country. It is stated to be a most elegant climbing shrub, with long, weak, diffuse, interweaving branches; and most delicate and lovely foliage, the leaves resembling gracefully curved or drooping plumes of feathers, of a yellow-green colour, 6 in. to 8 in. long, and 2 in. to 4 in. broad: each leaf consists of very numerous minute leaflets, most symmetrically disposed. The flowers are not remarkably conspicuous. The pod and seed are large in proportion to other parts of the plant. (*Bot. Mag.*, Nov.)

CXXI. *Pittospòreæ.*

671. **BILLARDIE'R*A*.**
5529*a* ovàlis *Lindl.* oval-*lfd.* ⊥ └┘ pr 20? my Gsh.Y V. Diemen's Land 1833? S s.p Bot.reg.1719
For "⊥," in *Hort. Brit.* Nos. 5527. to 5532., read "⊥."

Nearly related to B. longiflòra: it has a more oval obtuse leaf, and a smaller and shorter flower. The flowers change in colour, according to their age, from greenish yellow to dark purple. Dr. Lindley has suggested that this species of Billardièr*a*, with all the others, and the Sóllya (he has presented reasons in maintenance of the generic distinctness of this plant) heterophýlla, are "quite hardy enough to live in this country, trained to a west wall, if protected from wet in winter: at all events, a cold pit would be ample protection for them." Mr. Lowe, Nursery, Clapton, has introduced B. ovàlis. (*Bot. Reg.*, Nov.) In the same place, the characteristics of an allied New Holland plant, of great beauty, are given from Mr. Allan Cunningham, who discovered it in 1822. It is named

CHEIRANTHE'RA *Cun. MSS.* lineàris *Cun. MSS.* (*Cheir*, the hand, *anthera*, an anther; the anthers bend away from the ovary, forming themselves into a line slightly curved, like the fingers of an open hand; resembling what occurs in the pleurandras of the same country.) It is an upright shrub, with linear entire clustered leaves, and blue erect blossoms disposed in corymbs.

CXXXI. *Passiflòreæ.*

3472. **MALESHE'RB*IA*.**
linearifòlia *Poir.* linear-lfd. ○? └┘ or 1½ aut P.B Andes of Chile 1831. S lt Bot. mag. 3362
M. paniculàta *Don* in Ed. Ph. Journ. 1827, M. coronàta *Don* in Sw. Br. Fl. Gard. 167. See *Gard. Mag.* viii. 722.

Monopetalous Dicotyledonous Plants.

CLXX. *Ericeæ.*

521. **AZA'LEA** 4341 indica [Bot. reg. 1716
var. variegàta *Lindl.* variegated-*corollaed* ■ ⊔ or 3 my Ro.W China 1832. C p.l

The celebrated variegated Chinese azalea; to procure which, alive, so many attempts have been made, in vain, for these twenty years. The living plant or plants of it, imported by M'Killigan, and purchased by Mr. Knight, Chelsea (see IX 474.), has flowered with Mr. Knight; who has, it seems (X. 281.), plants of it for sale. (*Bot. Reg.*, Nov.)

CCIX. *Gesnèreæ.*

1698. **GESNE'R*IA*.** [of bot. Nov. 1834, fig.
15332*a* Coóperi Paxton *Mr.* Cooper's ✻ ⍍ or 2 my.jn S Brazil 1829? C a.l.p Paxton's mag.
" G. bulbòsa *Hook.* Bot. Mag. 3041.;" not, we presume, of *Bot. Reg.* 343.

Received from Brazil, to the late Mrs. A. Harrison, by her brother. Mr. Paxton is convinced, by repeated observation, that it is distinct from G. bulbòsa. He has named it after Mr. Cooper of Wentworth Gardens, who cultivates the gesnerias with remarkable success.

CCXI. *Scrophularíneæ.*

1783. ***MI*'MULUS** 15900 lùteus
var. Youngàna Lod.? *Mr.* Young's ♃ £ or ‡ jl.au Y.spot Chile 1833? D p.lt Bot.mag.3363

Received, at the Glasgow Botanic Garden, from Messrs. Loddiges, by this name. It is certainly among the most beautiful of the varieties: it has the corolla of a rich full yellow, and every segment marked with a large blotch of a rich red brown inclining to blood colour. (*Bot. Mag.*, Nov.)

65. **CALCEOLA'RIA** 27995*b* crenatiflòra *Cav.* Gard. Mag. 9. 620. [D lf.m.s Sw. fl. gar. 2. s 262
knypersliénsis *D. Don* Knypersley Hall £ △ or ‡ jn.s Y.Dp.Br English hybrid 1834?

A hybrid offspring of C. crenatiflòra and C. atrosanguínea; raised by Mr. P. N. Don, at Knypersley Hall, Staffordshire, the residence of J. Bateman, Esq. It is of more robust growth than C. crenatiflòra. The corolla is of a bright yellow; the lower lip orbicular, having a large patch of a chocolate brown. (*The Brit. Flower-Garden*, Nov.)

CCXX. V*erbenàceæ.*

1749. ***V*ERBE'NA** 28420 pulchélla
var. coróllâ-álbidâ whitish-corollaed ♃ ⊔ or 1 jn.s Wsh Garden at Coul 1834. C co

Out of four plants raised, this spring, from seeds of *V.* pulchélla, two have proved white-flowered. This variety is a valuable addition to the ornaments of the flower-garden. It differs from *V.* pulchélla in these particulars: the absence of colouring matter in the limb of the corolla; the throat slightly touched with yellow, just sufficient to give warmth, as an artist might say; the anthers want the purple tint, as do the angles of the stem; and the stem is devoid of the numerous purple dots which are present upon the stem of *V.* pulchélla itself. The variety is a plant of more lively appearance.

*V*erbèna pulchélla and chamædrifòlia, planted in beds, succeed here (Coul, Scotland), during the summer months, quite as well as in England; and, just now (Oct. 16.), we have in full flower, in the open air, *V.* pulchélla and *c*hamædrifòlia, *H*eliotròpium peruviànum, *Petùnia* nyctaginiflòra, Lobèl*ia* lineàris; Fúchs*ia* microphŷlla, tenélla, virgàta, grácilis, and coccínea; Alonsò*a* incisifòlia and grandiflòra [?]; with numerous varieties of pelargoniums. Alonsò*a* grandiflòra [?], from seed, we find more ornamental than from cuttings. In the plant from seed, the racemes of beautiful flowers keep an upright position; in the plant from a cutting, they soon become prostrate, and partly hidden by the luxuriant and dense herbage below. — *G. M. Elliott. Coul, Oct.* 16. 1834.

MONOCOTYLEDONOUS PLANTS.

CCXL. *Orchídeæ.* § Vándeæ.

2557*a* BATEMA'NN*IA* Lindl. (*James Bateman, Esq.*, of Knypersley Hall, Staffordshire; an ardent collector and successful cultivator of orchideous epiphytes.) 20. 1. Sp. 1.—
Collèy*i* Lindl. Colley's ɛ [△] or ♄ au P.W.G Demerara 1834. D p.r.w Bot. reg. 1714

A very handsome species, extremely different from the species of any genus hitherto described. It is named Collèy*i*, in honour of Mr. Colley, Mr. Bateman's collector in Demerara. The plant has somewhat the aspect of a Maxillària, has pseudo-bulbs, obovate-oblong plaited leaves, and a pendulous raceme of flowers springing from the base of the pseudo-bulbs. The sepals and petals are of a brownish purple within; without, green: the labellum white. (*Bot. Reg.*, Nov.)

ART. III. *Domestic Notices.*

ENGLAND.

CHENOPO'DIUM Quinòa. — Humboldt states (as we have quoted in the *Encyc. of Gard.*, 2d edit., § 948.) that this plant, in Mexico, ranks in utility with the potato, the maize, and the wheat. The leaves are used as spinach or sorrel, or as greens; and the seeds in soups and broths, or as rice. Throughout great part of South America, and especially in Peru, the seeds are in as common use as rice is in Hindostan. The seeds are considered more heating than rice, and on that account they are frequently given to domestic poultry to make them lay early. The plant is an annual, and in general appearance resembles the *A'*triplex horténsis, or French spinach; and, under the same circumstances of soil, climate, &c., will grow to about the same height as that plant. The seeds are small, yellowish white, round, somewhat flattened, about a line in diameter, and, on a cursory glance, might be mistaken for those of millet. Mixed with the latter seeds, and fermented, a pleasant kind of beer is said to be produced. They are contained in a single envelope, from which they are very easily separated. The *Quinòa* was first introduced into England in 1822; and it has ripened seeds at Kew. No particular notice, however, appears to have been taken of the plant till this season, when it has been grown by A. B. Lambert, Esq., V.P.L.S., at Boyton, where it has ripened abundance of seeds on plants varying from 3 ft. to 7 ft. in height. These seeds Mr. Lambert will, no doubt, distribute all over Europe; and, we trust, the plant will now have a fair trial both in gardens and fields. To do any good in producing nutritious seeds, the plant should be subjected to field culture, in which we see not the slightest difficulty. It might be were exhibited. Some cabbages, raised from cuttings by Mr. Denson, excited considerable attention; as did a grafted pelargonium, exhibited by Mr. Searle. There were six cottagers' prizes for fruit and vegetables; and five prizes given for the best cultivated cottage gardens. The highest of these prizes (20*s.*) was gained by James Hewitt of Wimpole. (*Ibid.*, May 16.)

June 18. Ranunculuses, roses, and pinks were the chief attractions at this exhibition. The first prize, for strawberries (Keen's seedling), 37 to the pound, was gained by Mr. Dall of Wimpole. There were eight cottagers' prizes. (*Ibid.*, June 20.)

July 9. The carnations and picotees, which were the principal attractions at this exhibition, were shown chiefly by Mr. Hogg of Paddington, Mr. Widnall of Granchester, and many others. Some beautiful georginas were shown by Mr. Widnall, Mr. Green, and the Rev. A. Fitch. (*Ibid.*, July 11.)

Sept. 10. The grand show and dinner attracted a very numerous company; to whom the beauty and excellence of the articles exhibited, and the elegant decorations of the room, seemed to give general satisfaction. The decorations "comprised a collection of lofty arches, arranged as a hexagon around a pillar, on the top of which was placed a splendid fuchsia. From a point on the sides of the hexagon sprang three triumphal arches, occupying the remainder of the tables. The shaft of each arch was surmounted by a Corinthian capital formed of georginas, the colours of which were elegantly varied. The framework of the whole was tastefully decorated with laurels and georginas intermixed. Not less than six or eight thousand blooms were employed in the ornamental parts of this exquisitely beautiful show. Add to this the magnificent exhibition of fruits, flowers, and vegetables which covered the tables, and the assemblage of the '*fairest* flowers of the creation,' who graced the show by their presence, and we will venture to affirm that the *coup d'œil* was as imposing as the most imaginative mind could conceive." The principal flowers exhibited were georginas; and those of Mr. Brewer and Mr. Widnall, among which were several seedlings, were the most admired. There were no cottagers' prizes. (*Ibid.*, Sept. 19.)

Cambridge Florists' Society. — *June* 16. This show was for ranunculuses, pinks, and roses. The flowers were extremely fine; particularly the pinks and roses, which were truly splendid, much better than on former occasions. There were also two elegant collections of pansies exhibited by Messrs. Widnall and Brewer; and an extremely fine Fúchs*ia* globòsa of Mr. Widnall's; also a beautiful specimen of the Alstrœmèr*ia Pelegrìna*, belonging to the same cultivator; and Mr. Brewer exhibited a fine Salpiglóssis grandiflòra. (*Ibid.*, June 20.)

CHESHIRE. — *Chester Florists' Meeting.* *April* 28. This exhibition was for auriculas and polyanthuses; and some very fine flowers were shown. The best auricula was Freedom, shown by R. F. Buckley, Esq.; who gained many other prizes, and was, we think, the most successful competitor.

CORNWALL. — *Royal Horticultural Society of Cornwall.* The pine-apple, shown by M. Williams, Esq., of Trevince, which obtained the highest prize, was a very handsome fruit, and high-flavoured. The melons were large and well-formed, as were also the grapes. Some of the apples of last year were beautifully preserved specimens, especially the Ribston pippin, Aromatic, and Nonpareil. The strawberries, exhibited by Mr. Stevens of Penryn, were the finest we have seen this season. The plants exhibited by G. C. Fox, Esq., were much admired. The heaths, from Sir Charles Lemon's collection, were considered good specimens; but the greatest novelty to us was a seedling variety of Calámpelis scàbra, from the garden of E. Turner, Esq.: the flowers are much larger than the original kind, and of a paler colour. The show of pelargoniums was very beautiful. The assortment of vegetables was good for the season, particularly of rhubarb, peas, potatoes, onions, lettuces, and carrots. A dish of the *O′*xalis crenàta, the produce of this year, was exhibited from the garden of L. C. Daubuz, Esq., of Truro: some of the tubers were of a good size, and very handsome. We understand that Sir C. Lemon, Bart., has made the experiment, this season, of cultivating it in the field, the same as potatoes. Twenty-two cottagers' prizes were distributed, of which H. Lobb and J. Taylor gained by far the greater number. Prizes were given for indigenous plants; and considerable interest was excited by the circumstance, that several of the species were found to be new to the Cornish flora. W. M. Tweedy, Esq., presented some seeds of the Deodar cedar, just received from Dr. Wallich; who was, in consequence, elected an honorary member of the Society. (*Royal Cornwall Gazette*, May 31.; and *West Briton and Cornwall Advertiser*, May 30.)

Aug. 27. This exhibition was principally for fruit, and green-house and stove plants. There were some fine carnations and georginas. The plants sent by nurserymen were placed in a separate room. There were thirty-three prizes for cottagers, six of which were gained by Henry Lobb of St. Glenvias. The most rare plant exhibited was a new species of Cymbídium, picked up in the woods, near Rio Janeiro, by Captain Sutton. Sir Charles Lemon sent two fine Orchídeæ; and he and his gardener, Mr. Booth, received the thanks of the Society. (*The West Briton and Cornwall Advertiser*, Aug. 29.)

Oct. 22. This was a very interesting exhibition. Notwithstanding the advanced season of the year, the display of flowers and fruit was beautiful and extensive. The president, Lord Boscawen, in adverting to the superiority of the articles from the cottagers' gardens, took occasion to state that "an excellent treatise, entitled the *Cottager's Manual*, had been prepared by Mr. Booth," which he strongly recommended. He also mentioned that, in one or two cases, prizes had been fraudulently obtained for articles which were not the *bonâ fide* produce of the cottager's garden; which we were sorry to hear. Among the articles exhibited were two new passionflowers, and a new and undescribed species of Amarýllis, from Maldonado, with small bright pink flowers; which, we believe, is only as yet in the collection of Sir C. Lemon. A new variety of Lobèlia, raised by Mr. Stephens of Truro, attracted much attention. It is nearly allied to Low's Purple; but the flowers are of a redder colour, and, we think, much superior to that pretty variety. Miss Warren of Flushing, whose indefatigable labours in this department we have so often had occasion to notice, exhibited another valuable collection of dried plants, to which the prize was awarded. The neatness of their arrangement, and the excellent manner in which the specimens were prepared, deserve great praise; and show that this lady is a perfect mistress of the art, and a most valuable member of the Society. Miss A. M. Fox of Falmouth exhibited some specimens of *Fúngi*, which were beautifully preserved; and Mr. Lobb of Trewince, an excellent collection of indigenous plants. *Adiántum* Capíllus Véneris, found in a rare and new habitat, was exhibited by the Rev. J. Punnett, St. Erth. (*The West Briton and Cornwall Advertiser*, Oct. 24.)

CUMBERLAND. — *Whitehaven Horticultural Society. April* 25. The auriculas which gained the prizes at this meeting were particularly clear and firm, the edges being clearly defined, and in no part mingling with the body of the flower. There were several others, very fine indeed; one cluster, in particular, which would doubtless have carried away the prize; but there being one flower in the bunch which had a confused edge, it spoiled the pan. The hyacinths were also very clear and firm, and excited much attention. A table was set out with some very tempting fruit; especially apples and pears, which had been so well preserved from last year, that they looked as if they had only just been plucked from the trees. Some very choice vegetables excited general admiration: and, upon the whole, we are bound to say that, considering the unfavourable season, this was one of the best displays the Society has ever made. Mr. R. Elliot gained by far the greater number of prizes. Among the things he exhibited was a dish of peas, admirably preserved from the growth of the last year. [We should be happy to receive an account of his method.] Mr. J. Clark, Mr. W. Ellwood, and Thomas Falcon, Esq., were also very successful. There were no cottagers' prizes. (*Cumberland Pacquet*, April 29.)

May 23. This show was for tulips; and was one of the most superb ever witnessed in this county, there being more than six hundred fine specimens of those beautiful flowers in the room: one candidate alone, Mr. Thornton of

Keswick, showed upwards of one hundred. The most striking object in the room, after the tulips, was a bouquet, beautifully arranged in the form of the royal crown of England: the cushion on which the crown rested was represented by a bed of moss; the lower range of flowers were white, to resemble the ermine; while the velvet lining of the crown had its prototype in some rich crimson flowers. The artist had farther kept up the character of the emblem, by placing some flowers of similar colours to the ruby, the emeralds, &c., in different parts. A beautiful orange tree, with its rich green leaves and tender white blossoms, graced the centre of the room; and there were also capsicum plants, with their bright scarlet pods, and the rich pelargonium in all its extensive varieties: nor were the humbler families of our own fields neglected; for there were many British plants to which premiums were awarded. The show of fruit was much smaller than usual: there were two pine-apples, however, which gained prizes. Among the vegetables we noticed some stupendous stalks of rhubarb, together with some large cucumbers grown in this vicinity. (*Ibid.*, May 27.)

Aug. 7. This show, though not so large as some of its forerunners, was exceedingly interesting to the florist, in consequence of the many beautiful specimens of the carnation, especially those cultivated by Mr. Gird, which were the universal objects of admiration to every one who visited the room. The seedlings were certainly wonderful, some of them surpassing, in fulness of leaf and clearness of colour, most of the old flowers in the room: the edges were very distinctly defined, and the lines well preserved. It has been often stated that Mr. Gird had one of the finest beds of carnations in the county; and the number of prizes awarded to his skill, on this occasion, fully bears out the assertion. That gentleman obtained no fewer than 19 prizes out of the 26 awarded. Messrs. R. Elliot, J. Clark, W. Ellwood, J. Gaitskill, and W. Greener were also very successful. The bouquets were remarkably beautiful. (*Ibid.*, Aug. 12.)

DEVONSHIRE. — *Devon and Exeter Floricultural Society. April* 17. Among the plants and flowers we particularly noticed a splendid bouquet of turban ranunculuses exhibited by the Rev. G. Norris, Dix's Field, grown without any protection, 500 ft. above the level of the sea, at Rose Craddock Villa, near Liskeard, in the county of Cornwall; a very fine bouquet of Brompton stocks from S. Whittaker, Esq., Ide; the superb collection of ericas and other green-house plants of Edmund Granger, Esq.; hyacinths, by Mr. Walker of Alphington, measuring 21 in. from the surface of the bed; an extraordinary auricula, by Mr. Webber, St. Sidwell's, with 34 pips on one stem, double anemones, &c.; Mr. Clark's auriculas and turban ranunculuses; Mr. Reynolds's auriculas; polyanthuses, pelargoniums, tulips, roses, &c. The exhibition was also, as usual, much indebted to the nurserymen, for the variety and excellence of the display. Messrs. Lucombe, Pince, and Co., who are ever forward in enriching these displays, exhibited some beautiful ericas, and a choice collection of green-house and hot-house plants. Their superb new Dutch double anemones, consisting of 100 distinct named varieties, were not only great novelties, but exceedingly beautiful. Among the roses was a new variety of the *Ròsa* odoràta, called the white camellia rose. The best seedling Calceolària, was Pince's præcípua. We observe Hogg's *Treatise on the Pink and Carnation* offered as one of the prizes for pinks at the June exhibition. (*Trelawney's Exeter Flying Post*, April 24.)

Devon and Exeter Botanical and Horticultural Society. — May 1. Fine specimens of plants were exhibited from the collections of Lord Rolle; S. T. Kekewich, E. Granger, J. Hart, R. Pattison, J. Sweetland, J. Gidley, Esquires; Mrs. Wells, Dr. Tayleur, Dr. Miller, Col. Wright, L. Ponsford, Esq., Rev. R. Stephens, Mr. J. Clarke, Mr. Webber, Mr. J. Manley, Mr. Booth, Mr. Hall, Mr. Eardley, &c. Among many other articles worthy of notice were eight seedling auriculas, of the present year's growth, and the largest turban ranunculuses in the room, by Mr. Webber of St. Sidwells; and a sprig and flower from a plant, now 12 ft. high, of the Meliánthus màjor, which was raised from seed in 1831, by Mr. Ranney, and placed last spring in the open ground, where it has stood the winter without protection. But the grand attraction of the exhibition was the magnificent display of plants and flowers by Lucombe, Pince, and Co., who on this occasion actually exceeded their former displays. They exhibited a large and splendid collection of pelargoniums, conspicuously the finest in the room; some gorgeous specimens of that lovely genus, Amarýllis, of the richest and most brilliant colours, beautifully striped and variegated, several of which were seedlings of their own, and one of which, in particular, A. grandíssima, was much admired; some fine specimens of hardy shrubs; that lovely hardy climber, the Wistària Consequàna; and a very superb seedling hybrid rhododendron of their own raising, flowering for the first time this spring: it is of a rich full crimson colour, and is deeply spotted all over the upper parts of the flowers with black spots, quite distinct from any thing we have hitherto seen. They also exhibited 120 distinct named varieties of the double Dutch anemones, of the richest and most varied hues, as well as of the most compact and beautiful forms; nothing that we have hitherto seen in the way of double anemones can equal them: some of the flowers produced in the room actually measured nearly 5 in. in diameter. They had also a fine bouquet of roses, composed of the yellow China rose, the yellow Noisette, the white camellia rose, the Bourbon rose, &c. &c. Mr. Veitch, though he declined exhibiting for prizes, sent some large citrons, oranges, and lemons, from 4 ft. to 8 ft. high, covered with fruit and blossoms; a plant of the true crimson *R*hododéndron arbòreum, in blossom; and many specimens of hardy hybrid rhododendrons, from the open ground, of rich crimson and deep rose shades, several of them beautifully spotted; also that elegant exotic climber, Tropæ'olum tricolòrum, covered with several hundred of its beautiful tricoloured flowers, of scarlet, purple, and yellow; Tropæ'olum pentaphýllum, with unique green-spotted flowers; a collection of upwards of sixty varieties of ericas in bloom, &c. &c. Thirteen cottagers' prizes were distributed, of which Thomas Crocker obtained five, and Thomas Coleman three. Among the indigenous plants was a specimen of *I*'xia Bulbocòdium, which was not before known to exist in Devonshire in a wild state. One of the prizes given was for the best specimen of the citrus tribe raised without artificial heat. (*Ibid.*, May 8.)

July 10. As compared with the former exhibitions, this was scanty, neither Messrs. Lucombe, Pince, and Co., nor Mr. Charles Sclater, whose various plants and flowers used to add so much to the splendour of these exhibitions, contributing: Messrs. Dymond, too, have relinquished a portion of their business, and, consequently, their supply was limited. Mr. Veitch was most liberal in his contributions, but neither he nor Mr. Dymond competed for prizes: to the former, however, the thanks of the committee were awarded. The gentry of the county, also, did not contribute in the way in which they have been wont to do; but, notwithstanding these drawbacks, there was a rich and beautiful display of very choice productions; and, whilst the fruits were of the most delicious qualities, the vegetables, in every variety, were excellent. A more numerous company also attended than on the preceding occasion. There were sixteen cottagers' prizes, six of which were gained by Thomas Crocker. (*Ibid.*, July 17.)

Oct. 2. Messrs. Dymond and Co. had a splendid collection of seedling and other georginas, and some remarkably fine cockscombs; and Mr. Veitch a variety of hardy and green-house shrubs. The fruits were remarkably fine, consisting of pines, melons, grapes, nectarines, peaches, pears, and apples. The grapes merit every thing that could be said in the way of encomium, many of them having been produced without fire heat, and yet being of the most full and luscious appearance. The apples, too, were extraordinary productions; and among them, two seedlings, from the gardens of E. Gattey, Esq., Harefield, Lympstone. These had never before been fruited in Devonshire; and measured the one 15 in., the other 14 in. in circumference. There were, also, on this table, several specimens of home-made wines, which were spoken of as being of very choice quality. The culinary vegetables were of great variety, and exhibited the manifest improvement that has taken place in the modes of culture of those useful productions; nor was it by any means the least interesting feature in this exhibition, that a large proportion of them were from the gardens of cottagers. The vegetables grown on Dartmoor, by Thomas Spears, were of extraordinary size. The turnips varied from 15 in. to 20 in. in circumference; and the carrots and eschalots were equally good. (*Ibid.*, Oct. 9.)

[*Camèllia japónica var. Fórdii.*—This is a variety between Lady Hume's Blush and the myrtle-leaved. We have just (Oct. 26.) seen a plant sent to London for exhibition, by Messrs. Lucombe, Pince, and Co., and consider it very beautiful, and very distinct. We understand from Mr. Townsend, the foreman of the plant department in the Lucombe Nursery, who has shown the specimen to many of the amateurs about London, that it is universally admired.]

North Devon Horticultural Society.—*June* 4. The brilliancy of the decorations was injured by a deficiency of georginas; but the show, in the choice variety of the plants, exceeded, in the estimation of the scientific judges, every preceding display for the season of the year. The table of culinary vegetables presented a fine display; and the fruits were rich and abundant. An object of great curiosity was a miniature vine, growing in a pot, with fruit on it, produced by the Rev. J. L. Harding. The cottagers' exhibition was not at all inferior to the productions of their wealthier neighbours; comprising the finest specimens of peas, potatoes, cabbages, onions, strawberries, apples, &c. The exhibition attracted the attendance of Messrs. Pontey and Rendle, from Plymouth, and Messrs. Lucombe and Pince, from Exeter. The latter exhibited a beautiful collection of pelargoniums; a great variety of calceolarias; and a *R*hododéndron arbòreum álbum, in flower, for the first time, in Devonshire: but the plant most admired was a Gesnèr*ia* maculàta. Mr. Pontey had a very beautiful collection, embracing upwards of forty sorts of ranunculuses; a splendid specimen of the Alstrœmèr*ia* aurantìaca, &c. &c. Mr. Rendle's stand contained a numerous and beautiful assortment of pelargoniums. Among the articles exhibited by amateurs were two by the Rev. C. Mules; one, a bouquet containing 100 different sorts of flowers; and the other, some cabbages, weighing above 20 lb. each. Thirty-seven cottagers' prizes were distributed. (*Woolmer's Exeter and Plymouth Gazette*, June 7.; and the *County and North Devon Advertiser*, June 6.)

Aug. 20. At the top of the room, the letter B., in compliment to Mr. Buck, the president for the present year, and the letters N. D. H. S. (North Devon Horticultural Society), were formed with an extensive selection of georginas of various shades; and in the centre of the scroll was represented a cornucopiæ, with some very choice fruit. On each side of this were festoons of flower wreaths and large bouquets. The orchestra, as upon former occasions, was ornamented in front with flowers and evergreens, having intermixed with them the largest bouquet in the room, from the garden of the Rev. C. Mules of Muddiford: it was a most splendid specimen of the kind. The walls at the lower end of the room were richly decorated with flowers, plants, &c. Over the chimneypiece was an extraordinary production of about twenty stupendous bunches of black grapes on a single shoot, from the garden of Earl Fortescue. Mr. Burge, nurseryman, of Barnstaple, contributed largely to the attraction in this part of the room. We observed his name neatly worked with yellow flowers on a ground of moss, which had a good effect among a fair collection of georginas, eighteen sorts of hollyhocks (some of them very choice), about fifteen sorts of China asters, twenty sorts of seedling heartsease, noisette roses, calceolarias, lobelias, and an All Saints cherry tree, beautifully covered with its pendulous fruits and full-blown flowers. The walls on the west side of the room were decorated with splendid bouquets of flowers, one of which, belonging to Mr. Bale, nurseryman, of Westacott, was about 5 ft. in height. Among the vegetables were several exceedingly large onions, belonging to Mr. H. Trix of Southmolton; they were sown on the 20th of February, in a box [? bed] 3 ft. 3 in. by 11 ft.; and the box yielded 126 onions, weighing 105¼ lb. There were also some fine specimens of potatoes, Roman beans, peas, cabbages, cucumbers, beet root, celery, and other vegetable productions. In the room appropriated for the show of flowers, &c., by nurserymen at a distance was a very superior collection furnished by Mr. Veitch of Killerton. It consisted of about 200 varieties of the georgina, of almost every hue; among them, the new seedling white, Emma, Ariel, Jason, Criterion, and Alicia; 100 varieties of annuals, &c. There were forty cottagers' prizes, of which Robert Dingle gained by far the greater number. (*County and North Devon Advertiser*, Aug. 22.)

Oct. 7. The room was elegantly decorated with georginas; and Messrs. Bale, Burge, Pontey, Rendle, and Lucombe, Pince, and Co., &c., contributed as liberally as heretofore. There were some fine green-house plants exhibited, several of which were by Mr. Booth, from the gardens of Sir C. Lemon; and some excellent vegetables. In the cottagers' room were some apples and pears of immense size. There were forty-five cottagers' prizes, several of which were gained by John and Thomas Crang, and Sarah Harris. A very interesting scene now took place, in the distribution of prizes to four cottagers, who had produced testimonials of exemplary character. The first prize, of 4*l.*, was awarded and paid to Roger Edgcumbe of Milton Damerel, recommended by William Law, Esq.; the second, of 3*l.*, to Richard Rogerman of Horwood, recommended by the Rev. John Dene; the third, of 2*l.*, to John Hunt of Fremington, recommended by G. A. Barber, Esq.; and the fourth, 1*l.*, to James Corney of Marwood, recommended by the Rev. Charles Mules. The president, on awarding the first prize to Roger Edgcumbe, said he was delighted to present him with the first token offered to a cottager who had brought up his family without relief from the parish, and in good moral principles. The secretary read an additional testimony in favour of the character of Roger Edgcumbe, from which it appeared he has had ten children, six of whom are now living; that all the ten arrived at the age of twenty-one years; that two of his daughters died, after long illness; that he paid the medical bills and funeral expenses; that he maintained the child of the deceased daughter a considerable time; that, in June last, his youngest son broke his leg, and had all his clothes burnt in the house of his master, a farmer, whose premises were destroyed by fire; that he has since maintained him, and paid for medical attendance; that he never had a child bound apprentice to the parish, nor ever received relief; that the highest wages he ever received was 1*s.* 2*d.* a day, and at the present time only 1*s.* This account in no way detracts from the deserving qualities of the other three, as the president handsomely intimated on awarding their respective gratuities; for which they returned thanks, and withdrew, with evident feelings of gratification at this public acknowledgment that they had fulfilled their duties in the station to which it had pleased God to call them. (*Ibid.*, Oct. 10.)

Royal Devon and Cornwall Botanical and Horticultural Society. — *May* 22. Mr. Pontey's stove and American plants were very much admired; as were the plants sent from the Duke of Bedford's seat at Endsleigh, though the latter had travelled twenty miles. Many other very fine plants were exhibited; but, we are sorry to say, some of the finest pelargoniums were almost completely ruined by the number of cuttings purloined by some of the visiters to the show. Such conduct is in the highest degree disgraceful. The secretary, after a few preliminary observations, called the attention of the meeting to a magnificent specimen of Victoria wheat, sent from Wembury by Sir E. Thornton, exhibiting from twenty to thirty stems, arising from one root, all in fine ear, although only in the 25th day of their growth, having been sown (according to the exhibition ticket attached) on the 27th of April. There were other fine specimens exhibited in ear, but none which at all approached Sir Edward's, in point of merit or the short period of their growth: the height of Sir Edward's specimen was between 3 ft. and 4 ft. This is a bearded wheat, a kind not in general favour among the farmers, but in this instance we must suspend our judgment, in deference to the authority of Humboldt, until it has had a fair trial. The secretary next called the attention of the meeting to Dale's hybrid turnip. He also exhibited a specimen of the wood of the Cathartocárpus fístula, the pods of which are known in the shops under the name of Cássia fístula, and the pulp of which is the basis of the well-known preparation called the lenitive electuary. The timber of this tree gives out, both by boiling in water and by means of spirit, a most beautiful pink dye, of which the secretary exhibited a specimen in a bottle, together with a piece of silk dyed with it, and also a snuff-box turned out of the same wood, the grain of which was beautiful, and its odour on being rubbed agreeably aromatic. (*Devonport Weekly Journal*, May 29.)

July. The principal interest of this exhibition arose from the specimens of ropes shown of pita and of hemp of the same size, in order to compare the relative strength of the two ropes. (*Devonport Independent.*)

DURHAM. — *South Durham and Cleveland Horticultural Society. April* 24. The fruit and culinary vegetables were not particularly abundant. Mr. T. Stevenson was by far the most successful competitor for the flowers.

GLOUCESTERSHIRE. — *The Bristol and Clifton Horticultural and Botanical Society. May* 13. The display of plants and flowers exceeded in beauty and extent any previous collection at this season. The display of tulips was not so excellent as it would have been, if the show had been earlier. Among the anemones were noticed some remarkably large blooms. (*Keene's Bath Journal*, May 19.)

HEREFORDSHIRE. — *Hereford Horticultural Society. April* 22. Some very fine auriculas were shown. R. Parkinson, Esq., and Mrs. J. Phillips gained the most prizes. Of the polyanthuses, Mrs. J. Phillips and R. J. Powell, Esq. displayed the finest; and of the hyacinths, decidedly Mr. Godsall. A plant of the original Alpine auricula was exhibited; and some fine large specimens of a seedling apple, raised at Stoke Edith Park, the seat of E. T. Foley, Esq., M.P. Some pansies, shown by R. J. Powell, Esq., were also much admired. (*Hereford Journal*, April 30.)

Sept. 24. At this show, about thirty specimens were entered for competition more than at any previous show of the corresponding season of the year; and, when it is considered that the period fixed upon (although the same day of the month as last September's display) was too late for peaches and nectarines, and that the crop of pears was very deficient, it is evident the georginas must have been much more abundant than at any previous exhibition; indeed, it is acknowledged that they were never seen here in such profusion and splendour as on this occasion. The asters were but scantily supplied; apples were abundant, and of first-rate quality; pears were not expected in profusion; but some excellent specimens were exhibited, particularly six plates sent by Mr. Edwards of Bunshill, a non-subscriber, to whom probably all the prizes in that class would have been awarded, had he been a subscribing member. Another plate was shown, of Gansell's bergamot, excellent in quality, by Mr. Hooper, also a non-subscriber. The outdoor grapes were remarkably fine, and generally fully matured; a proof of the forward state of the season. The celery had taken its growth so rapidly, that gardeners had evidently not kept pace in blanching it; and the onions were the finest ever shown here. On the centre of the large stage appeared a representation of a single striped georgina, composed of nearly 300 georgina blossoms, yellow and dark red; it was 6 ft. across, and had a splendid effect. The top petal supported a floral crown formed of georgina, hollyhock, and convolvulus wreaths, the georgina being styled "King of Flowers." At the foot of his majesty's throne were two cornucopiæ, pouring out the choice treasures of Flora and Pomona. The effect altogether was admired, and imparted general satisfaction. (*Ibid.*, Oct. 1.)

HUNTINGDONSHIRE. — *Huntingdon Horticultural Society. April* 25. Two beautiful specimens of *Pæònia Moútan* were the great attraction of this exhibition. A number of fine auriculas, polyanthuses, hyacinths, and polyanthus narcissuses were much admired.

LANCASHIRE. — *Rochdale Floral and Horticultural Society. April.* The flowers were very fine, particularly the hyacinths. The vegetables were not very abundant. — *T. W.*

Lancaster Floricultural and Horticultural Societies. — We fear these Societies are given up, as we have received no accounts of them this season, as heretofore.

Manchester Horticultural and Botanical Society. — We have received no detailed account of the meetings of this Society. What has been sent to us is merely a printed list of the number of prizes that have been gained by each individual.

Lancaster Floral and Horticultural Society. — *April* 23. No details of this meeting have reached us.

LEICESTERSHIRE. — *Hinckley Floral and Horticultural Society. July* 23. The carnations were numerous, and many of them excellent; and the fruits and vegetables far exceeded in number and quality the expectations of the members. Several splendid productions were presented to the Society by Mr. Wilson, gardener to Earl Howe, which greatly added to the beauty and excellence of the exhibition, and were much admired. Among the curiosities deserving of notice were a beautiful bloom of the Stapèl*ia*, sent by Mr. Woodman of Thorpe; and a fine specimen of skinless oats, imported from Japan, and grown by Mr. Shipman. (*Northampton and Leamington Free Press*, August 2.)

MIDDLESEX. — *The Metropolitan Society of Florists and Amateurs. Dec.* 19. 1833. This was a most extraordinary exhibition, considering the season of the year. Messrs. Rollison of Tooting, Messrs. Chandler of Vauxhall, and many others, obtained prizes. The camellias of Mr. Smith of Islington, and the pelargoniums of Mr. Dennis of Chelsea, were very much admired.

April 16. 1834. We have already noticed this show, p. 235. The Hòve*a* Cèls*i* of the Messrs. Rollison was one of the finest plants of the kind ever exhibited. Mr. Pratt's Dillwŷn*ia* was also very fine. In our previous account, we erroneously stated these beautiful plants to have been sent by William Harrison, Esq., of Cheshunt.

June 10., see p. 323.; *June* 19., p. 396; *August* 13. and 14., p. 516. We have since received a letter, signed E., complaining that, when we praised the liberality of Mr. Cross on this last occasion, we omitted to mention that he cleared above 700*l.* by the number of persons who came to the exhibition paying 1*s.* each. This *may* be true; but, had it not been for the fineness of the day, and the accessories provided by Mr. Cross, we doubt whether the flowers alone would have drawn together a sufficient number of persons to clear the expenses. As it was, the affair appears to have been advantageous to all parties. It must have done good to the Society, and the nurserymen who exhibited, by making both better known; and, if E.'s account of Mr. Cross's profit be correct, it has also put a considerable sum into the pocket of a public-spirited and liberal individual.

The Shows of the London Horticultural Society at Chiswick will be found noticed as follows: — *May* 10., p. 299.; *June* 7., p. 356.; *July* 5., p. 410.; and *Sept.* 13., p. 523.

Finchley and North London Society. — *April* 23. This show was for auriculas; that of *June* 18., for pinks; and that of *July* 22., for carnations and picotees. All contained fine specimens.

NORFOLK. — *The Horticultural Society of Norwich* joined to their September meeting a horticultural *déjeûner à la fourchette.* The show of the morning was magnificent; the display of georginas having surpassed any former exhibition; and the amusements of the evening, which ended in a ball, appeared to give general satisfaction. (*Bury and Norwich Post*, Sept. 24.)

Holt Horticultural Meeting. — This meeting, which was held two days after that of the Norwich Society, terminated in a similar manner. The morning exhibition was well attended. The cottagers' table was well filled, and many prizes were awarded to them. Among the principal objects of attraction were the oranges and lemons from Major Milles's conservatory, and a dish of the edible passiflora, which obtained an extra prize. The carrots and parsneps from Holkham were particularly admired; and, upon the whole, it might be termed a splendid collection. The show was followed by a *déjeûner* at the Shirehall, at which 130 ladies and gentlemen attended. (*Ibid.*)

Norwich Horticultural Society. — *June* 25. There was a profuse display of fruits, comprehending pines, grapes, melons, strawberries, raspberries, and, what are at this time of year more rare, apples in the best state of preservation. The great heat of the day, much increased by a very crowded room, caused many of the more delicate flowers to droop; but there was still enough of life and vigour in them to excite admiration. Different members of the Florists' Society ran away, as usual, with a large share of the prizes awarded to flowers; and the country cottagers who exhibited their esculent vegetables and fruits had every reason to be satisfied with the liberal encouragement tendered to them. The Society, indeed, is in a very prosperous condition, numbering no fewer than 692 members, being twenty-five more than there were last year. Mr. Mackie's collection of Orchídeæ excited great admiration. Mr. Hitchen had the merit, at a very great expense and trouble, to form this valuable collection, which is supposed to be the most perfect in the kingdom. The plants have very much improved in health, growth, and luxuriance, since they have been removed from the smoke of the city to the fresh air at Mr. Mackie's conservatories. (*Bury and Norwich Post*, July 2.)

Diss Horticultural Exhibition. — *May* 22. The large assemblage of company, and an excellent display of fruits, flowers, and vegetables, prove the great interest the Society still continues to excite in the neighbourhood; and the increased number of cottagers, as competitors for prizes, equally indicates that the benefits already conferred on this industrious class are duly appreciated by them. On the subscribers' table, we particularly noticed a fine collection of pelárgoniums, from the conservatory of Thos. L. Taylor, Esq.; a great variety of hardy and exotic plants, exhibited by the Rev. G. R. Leathes, Miss Wilson, and Miss Browne; and some most beautiful apples and pears, by Thomas Havers, Esq. On the cottagers' tables, in addition to many other specimens, were six large dishes of peas, seven of apples, nine of potatoes, and five brace of cucumbers. The number of prizes awarded to them was twenty-one. (*Ibid.*, May 28.)

June 26. The flowers were small and wanting in brilliancy, from the long drought; and many of them dropped off before the room was closed. The strawberries were plentiful and remarkably fine, particularly Wilmot's Superb and Keen's Seedling, some of the former weighing sixteen to the pound. Bad, however, as the show was, we were much gratified at being informed that a gentleman (a stranger) was so much pleased with the display on the cottagers' table, that he left a sovereign, to be given to them in additional prizes at the September meeting. (*Ibid.*, July 2.)

NORTHAMPTONSHIRE. — *Northampton Horticultural Society. April* 22. Some superb forced rhubarb, measuring between 3 ft. and 4 ft. in length, was much admired, as were some excellent Black Prince and white Frontignac grapes, from C. Hill, Esq.; strawberries, a fine Azàlea índica álba, and flowers of several kinds, from Edward Bouverie, Esq.; and some extraordinarily fine mignonette, from Mrs. Kerr. The auriculas and hyacinths were excellent, and, with many other fine specimens of plants, were chiefly contributed by Mr. Atkins, who won eighteen prizes. A new regulation of the Society, by which no person is allowed above one prize in each class, prevented many of the prizes being awarded, the judges, in several cases, not considering the specimens of sufficient merit. (*Northampton Mercury*, April 26.)

Northamptonshire United Horticultural Society. — *June* 8. Lord Southampton was the most successful competitor in the ornamental plants generally; and Mr. Atkins in the ranunculuses, pinks, and roses. There were some fine Providence pines, and some peaches and nectarines, from Earl Spencer's. The cottagers' table was well supplied: nine prizes were distributed, of which J. Webb gained three. (*Northampton and Leamington Free Press*, June 12.)

July 25. Mr. J. Martin's carnations and picotees were universally admired, and obtained numerous prizes. Some of his seedlings were particularly beautiful; and it was remarked, that several of the flowers that gained prizes for other competitors had been originally raised by him. Lord Southampton and Mr. Atkins were, as usual, very successful; and, out of eleven cottagers' prizes, J. Webb again gained three. (*Ibid.*, August 2.)

NORTHUMBERLAND. — *Botanical and Horticultural Society of Newcastle. March* 7. The fruits kept from the last year were excellent, and obtained many prizes; as did dishes of asparagus, early potatoes, cabbages, &c. Mr. Kelly received a bronze medal for a beautiful bouquet. (*Newcastle Courant*, March 15.)

May. The display of flowers was unusually splendid. The exhibition of plants, though not numerically great, contained many beautiful specimens. The best hyacinths were those shown by Mr. W. Kelly. (*Ibid.*, May.)

June 6. Prizes were given for peas and potatoes grown in the open air. Tulips were in abundance. The newly introduced prize for the best specimen of the orange tree in fruit gave great satisfaction; for, independently of the various other rich specimens, that which obtained the prize, one from the garden of Mr. Anderson, Little Benton, was truly magnificent. The exotics, and numerous bouquets of flowers, were not to be surpassed; and the pineapples and grapes were excellent. (*Ibid.*, June 14.)

July 4. Mr. T. Watson, gardener to J. Kirsopp, Esq., exhibited a remarkably fine dish of strawberries. Other fruit was shown and admired; but the most interesting prize was that of the sum of three guineas to the gardener who would produce the best testimonials of his abilities, and of the greatest length of servitude in one family; and this was awarded to Mr. James Fenwick, gardener to Matt. Anderson, Esq., Jesmond House, he having been eighteen years gardener in that family. (*Ibid.*, July 12.)

August 29. This was the anniversary meeting of the Botanical and Horticultural Societies of the counties of Durham, Northumberland, and Newcastle. A number of prizes were awarded, one of which was for a Treatise on the Cultivation of the Vine; after which the company dined. Before parting, the chairman, addressing the meeting, observed, that the Society had been of the greatest benefit not only to the gardeners themselves, but to the community at large; as it was impossible to look into our green-market and fruit-shops without observing the rapid advancement which had taken place in the culture both of fruit and vegetables, which, he observed, could now be had at almost every season of the year in the greatest variety, and of the very finest descriptions and quality. (*Ibid.*, Sept.)

Oct. 31. This exhibition was principally for fruit and culinary vegetables. Some very fine specimens were exhibited of the former, among which, perhaps, the most interesting were two seedling pine-apples, raised by Mr. Scott, gardener to E. Chorlton, Esq., at Sandhoe. The parent fruit (the Enville) was from seed saved in the autumn of 1830. The smaller of these two pines, when cut, was declared by the judges to be of the most exquisite flavour. There were likewise exhibited, gratuitously, a very fine dish of plums, consisting of Coe's and Wilmot's late red plums, both in fine preservation, from the garden of Mrs. Bewicke of Close House. The prize dish of apples, exhibited by Mr. Dale, was allowed to be the most superb one ever exhibited in the rooms of the Society: it contained no less than thirty varieties, all in the greatest perfection. (*Newcastle Courant*, Nov. 8.)

SOMERSETSHIRE. — *Glastonbury Horticultural Society.* We have received the rules and regulations of this Society; but have not been favoured with any account of its meetings.

Silwood Horticultural Society, held at Frome. — *May* 13. The display of fruit, flowers, and vegetables was of the first order. The tulips and ranunculuses of Mr. Culverhouse were particularly admired. Some of the latter measured 4 in. over. There were twelve prizes awarded to cottagers, for cabbages, potatoes, and nosegays. (*Keene's Bath Journal*, May 19.)

July 18. The carnations were very fine. The principal prizes for currants and gooseberries were gained by the Earl of Cork. Amelia Coles was the most successful of the cottagers. (*Bath Herald*, July 26.)

Bath Royal Horticultural and Floral Society.— *May* 14. The exhibition was allowed, by competent judges, to be exceedingly fine, both as to extent and the beauty and rarity of the specimens; and it was particularly interesting as being the first held by the Society. In the centre of the great room was a grand pyramidal flower-stage, of several tiers, loaded on every side with rare exotics and superb specimens, the whole surmounted with a palm tree in full "plumage," the term most applicable to its feathery growth. Classified specimens of fruits and flowers were also arranged in great profusion around the sides of the room, which was elegantly festooned and ornamented with devices in flowers complimentary to the royal patronage with which the Society is honoured. The numbers assembled having far exceeded all previous calculation, some little difficulty was experienced in going through the room; nearly 2000 persons being present. Among the plants deserving of particular notice appeared a beautiful orange tree, in full bearing, sent by G. Yeeles, Esq., and another by Lady Acland; and a superb Schizánthus pinnàtus, by Miss Bayly. Among the fruits were a magnificent fig tree, in full bearing, sent by the Rev. Dr. Hale; and vines, in pots, and in full bearing, by several persons whose names we could not learn. The elegant collection of plants and flowers exhibited by Mr. Maule of Stapleton, Mr. Miller of Durdham Down, Mr. Salter, Mr. Bartlett, and Mr. Collens, attracted general admiration. To those gentlemen some praise is due for their indefatigable exertions in adding to the beauty of the exhibition. An interesting feature of the exhibition consisted of nearly 200 specimens of British plants, collected from the neighbourhood of Bath, and arranged in classes according to the Linnæan system, by Mr. James Kitley, gardener, Pulteney Road. (*Ibid.*, May 17.)

June 24. To obviate the inconvenience complained of from the excessive crowd at the last meeting, on this occasion, the committee had erected a noble marquee, 60 ft. by 30 ft., and of proportionate height. Down the centre of this was erected an immense flower-stage, with ascending tiers of shelves, on the lower of which were placed the smaller and more delicate plants, which required closer and more minute inspection in order to appreciate their beauty, while the larger and more showy occupied the upper. On the topmost range were two noble specimens of the *Cy̆cas* species, placed at each end, one belonging to G. Yeeles, Esq., and the other to S. Barrow, Esq.; and, in the centre, a magnificent Mùsa paradisìaca, belonging to Mrs. Newby, the gigantic and freshly vivid foliage of which formed a beautiful contrast with the bright and intensely glowing hues which surrounded it on every side. The effect of this immense "double bank" of flowers, of every imaginable tint, as seen from either end, was strikingly beautiful. Spacious, however, as was the accommodation for the display and view of this magnificent collection, the throng was so dense, and apparently immovable, that a close inspection was denied to a very considerable portion of the company, and hundreds of visiters left without the possibility of inspecting those plants, fruits, and flowers to which the first prizes were awarded. In addition to the specimens exhibited for prizes, there were, on the present occasion, an immense number of plants, flowers, and fruits, sent by ladies and gentlemen in the city and neighbourhood, to add attraction to the show. Among these, Messrs. Maule, Miller, and Lee of Bristol sent largely, both of fruits and flowers. Mr. Miller also sent three fine pines to the fruit room, merely to decorate the stand. The fruit was arranged in the great room of the hotel, on a large oblong stand, with ascending ranges of shelves, similar to those in the marquee. Among the cottagers' prizes was a classified collection of botanical specimens ticketed and arranged by Mr. Kitley. A model for heating a conservatory from the kitchen boiler was exhibited by Mr. S. King. Among the decorations was a bird of paradise, formed entirely of heartseases. Twelve cottagers' prizes were distributed, three of which were gained by Mr. Morgan. (*Ibid.*, June 28.)

July 23. An excellent exhibition, but not so well attended as its predecessors. Among the specimens sent for show, but not for competition, were a variety of excellent green-house plants, sent by G. Yeeles, Esq., and about 200 different plants, many of them extremely fine, by Mr. Salter, whose georginas and cut flowers attracted much deserved attention, as did his orange trees in full fruit. Messrs. Bartlett and Chilcott contributed about 200 plants, which were also very excellent and much admired; Miss Bayly, a great number; General Loveday sent about fifty; —— Newby, Esq., from thirty to forty plants; and Mr. Maule of Bristol, a magnificent and varied collection. In the fruit tent was a splendid peach tree, exhibited by Dr. Hale, in a pot, and bearing several dozens of ripe fruit. Eight large bunches of Hamburgh grapes on one small branch, not above 2 ft. long, sent by the same gentleman, were also much admired. A cherry tree, grafted on a laurel, belonging to Mr. Horatio Davis, attracted curiosity. The exhibition for the cottagers' prizes was extremely good. The cabbages, potatoes, beans, &c., were far superior to any other productions of the same kind in the show. Mr. Kitley again exhibited a collection of botanical specimens. (*Ibid.*, July 26.)

Carnation, Picotee, and Gooseberry Feast, Holloway [*Bath*]. — *July* 22. Mr. Pond and Mr. Wilcox were the most successful competitors for the prizes. (*Ibid.*)

Taunton Horticultural Exhibition. — *May* 16. Tulips, tender exotic plants, and vegetables formed the principal of the articles exhibited by the gentlemen in the neighbourhood. Among the nurserymen's prizes were several for hardy shrubs. (*Taunton Courier*, May 21.)

SUFFOLK. — *Bury Horticultural Society. April* 22. The show of flowers, which was very good, was enriched by valuable specimens from the conservatories of Lord Calthorpe and the Rev. G. R. Leathes. The apples were in excellent preservation for the season; the nonpareils of the Rev. Mr. Ward of Haughley, as well as those to which the prizes were awarded, were exceedingly fine. The vegetables surpassed any exhibition we have before witnessed. Amongst them were some broccoli from the garden of J. H. Powell, Esq., at Hengrave, which weighed upwards of 7 lb. each, cut close to the flower, and without a leaf. But the most gratifying part of the show was on the cottagers' tables, which were crowded with vegetables of the finest quality. A spirit of emulation appears to be spreading among the cottagers of the neighbourhood, which is the best fruit that the institution can produce, and which, we hope, will meet with its just reward from the Society. (*Ibid.*, April 30.) [We understand that it is proposed to add a zoological collection to the botanical one in the Bury Botanic Garden.]

SURREY. — *The Frimley and Farnborough Agricultural, Horticultural, and Labourers' Friend Society. July* 7. This Society held their first show under the fine grove of oaks at Frimley Green; and the friends of the Society were highly gratified by this first attempt. Twenty-four cottagers received rewards, for the exhibition of useful vegetables, fruit and flowers, and manufactures, varying from 20*s.* to 2*s.*; also for the culture of their gardens, and the cleanliness of their houses and families. One individual, James Cook, working in a gravel pit for the parish of Farnborough, obtained seven distinct prizes; yet there were forty other prizes offered, and not contested. We are sorry to learn that two farmers threatened to discharge their men if they attended, or sent anything to, the show; and some of the men returned their tickets of admission to the benefits of the Society, in fear of receiving their discharge if they made use of them. Among the honorary exhibiters, we observed Mr. Waterer, nurseryman, Bagshot; Mr. Smith of Farnborough; Mr. Gibbs, seedsman, of Piccadilly, who exhibited his specimens of agricultural seeds; Mr. Mathews, the rural decorator, of Frimley; Mr. Lance, the secretary, who displayed his improvements in corn culture, and in raising potatoes from seeds; and his daughters, who exhibited a complete arrangement of flowers, according to the system of Linnæus, and also bouquets of the wild flowers and grasses of the district.

Sussex. — *Newick Horticultural Meeting. June* 26. The arrangements were so excellent, that every one was admitted without the least inconvenience or pressure. Among numerous articles deserving attention, we may mention those displayed in the nurserymen's booth as particularly striking. Mr. Cameron had a very fine collection of plants in pots, and a magnificent bouquet; Mr. Hooker of Brenchly, a collection of new and choice roses; Mr. Pierce, Piltdown, exhibited some fine plants in pots, and an extensive assortment of gooseberries, which, for size and flavour, could, we think, scarcely be surpassed. The carnations and picotees of Mr. Newman of Lewes (certainly one of the most skilful and successful cultivators of this class of flowers) excited the admiration of every one; and he obtained extra prizes. Mr. Mitchell had a splendid collection of plants; and, in the list of prizes, it will be seen that he obtained eleven out of the thirteen premiums which were offered for nurserymen's productions: among the novelties he exhibited we must not omit the Fúchs*ia* longiflòra, also a new species of *G*naphàlium, which was greatly admired, and obtained the silver medal as the best green-house plant in flower. The unrivalled collection of heartseases of Messrs. Allen and Rogers, Pimlico, deservedly attracted attention; as did also their fine collection of stocks, lupines, and other new and beautiful annuals and perennials. To complete the general effect of the exhibition, Mr. Wood's very extensive and choice collection of new and splendid roses, calceolarias, alstrœmerias, and green-house plants in pots, occupied the remainder of the booth, and, from their novelty and great beauty, often impeded the progress of the spectators. Mr. Read, the Earl of Abergavenny's gardener, and Mr. Stephens, gardener to Sir G. Shiffner, Bart., obtained prizes for hearteases and stocks. Mr. Stephens's collection of the latter, consisting of sixty distinct varieties, was much admired. It would take too much space to particularise the fruit; it will be sufficient to say, that there was above 3 cwt. A new variety of raspberry, the Turkish turban, was shown by Mr. Wood of Maresfield. The cottagers' table presented a gratifying spectacle, many of the fruits and vegetables being of the finest description. (*The Sussex Advertiser*, June 30.)

Chichester. — Cultivation of the Grape. It is with much pleasure that we have learned the formation and opening of a Society in this city for encouraging the growth of the grape vine on open walls. Considerable doubt has existed, fostered, indeed, by prejudice, whether Hamburgh and other grapes, usually grown under glass, could be ripened on the open walls; and many experiments have been tried, in the neighbourhood of this city, with a view to ascertain how far skill and care in the pruning and cultivation would operate to remove the doubt, and, by proofs, overcome the prejudice. These experiments have succeeded fully. Outdoor Hamburgh grapes, equal, in many respects, to those produced in houses, in flavour, and in size of berry and bunch, were shown for prizes on Oct. 13. Mr. C. Hoare of Siddlesham, about three miles from this city, was one of the first and most successful cultivators. Chiefly through his exertions a society for the encouragement of the growth of the vine on open walls has been formed under circumstances the most flattering. This Society held its first annual meeting on Monday last, when the display of grapes was beyond measure fine, exceeding the utmost anticipation which had been formed. Here were ten or twelve dishes of Hamburgh grapes, very many of the berries of which averaged from 3¼ in. to 3½ in. in circumference, and were perfectly ripe. A prize of two sovereigns, for the finest dish of black grapes, was gained by Mr. Lower of Siddlesham; the second, by Mr. Rogers, plumber, of Chichester; both Hamburgh. The first prize for white grapes, by Mr. Gillham of Siddlesham; and the second, by Mr. Cousens of Pangmere; both muscadine. A prize of two sovereigns for two bottles of the very best home-made wine, from outdoor grapes, by W. C. Newland, Esq.; and the second, by Mr. Halls, bricklayer. Between sixty and seventy persons dined together, after the show, at the Anchor, and partook of the fruit, which exceeded a hundred weight. (*Brighton Herald*, Oct. 18.)

The Pink Show of the Lewes and East Sussex Horticultural Society was advertised to take place on Aug. 2.; but no particulars have reached us.

The Brighton and Sussex Horticultural Exhibition was advertised for the same day. (*Ibid.*)

WARWICKSHIRE. — *Warwickshire Botanical and Horticultural Society. April* 16. The stove and green-house plants were very beautiful, and especially those shown by Mr. Willmore, many of which were rare. Messrs. Pope and Sons showed a remarkably fine collection of herbaceous plants, and of exotic plants in pots. Tubers of the *O'*xalis crenàta, and roots of the *S*tàchys palústris were exhibited as new culinary vegetables. Some of the other culinary vegetables were very fine, particularly some potatoes grown by Mrs. Woolley, and a cabbage by Mr. Tyndall, both of which obtained silver medals. We notice that the names of the plants in the printed list are remarkably well spelt. (*Aris's Birmingham Gazette*, April 21.)

Warwickshire Floral and Horticultural Society. — April 17. This interesting Society commenced its exhibitions for the season, under the most favourable auspices. The company present was numerous and highly respectable. The number and beauty of the flowers exhibited surpassed the most sanguine expectations; nor is it possible sufficiently to praise the spirit with which the supporters of this Society came forward with their specimens, not only for competition, but for the decoration of the rooms. The most choice plants were taken from the stoves and conservatories, and conveyed to the exhibition through an atmosphere nearly at the freezing point. The number and beauty of the plants shown at this early season of the year excited universal admiration. A curious specimen of apples was sent by Mr. I. Hill, which exhibited the singular appearance of the fruit of the last and the newly-expanded blossom of the present year, on the same branch, which was cut from the tree on the 14th of the present month. The cottagers' stage displayed many very creditable productions; and upwards of twenty prizes were awarded to this class of competitors.

May 15. The second exhibition of the season was graced by the presence of a numerous assemblage of respectability and fashion, including several noble and distinguished families of the neighbourhood, who appeared to be highly gratified with the beautiful and interesting display. We have seldom seen a collection of tulips which, for beauty, at all equalled those exhibited on this occasion. The show of pelargoniums was exceedingly numerous, and splendid beyond all precedent. Tulips and pelargoniums being the leading objects of this exhibition, the stove and green-house plants were rather limited in number, but choice and beautiful. The display of fruits and vegetables, and the cottagers' stand, in the lower room, were most gratifying; the tables being literally loaded with specimens of the finest imaginable description. The most successful exhibiters were Messrs. Pope and Sons, Mr. Kendall, John Willmore, Esq., and Mr. Bates, in the floral department; and Sir C. Throckmorton (Mr. Sadler, gardener), Mr. Kendall, Mr. W. Baker, and Dr. Johnstone (Mr. Tolley, gardener), in vegetables. The grapes from Mrs. Taylor, Moseley Hall, were exceedingly fine; and the lemon and orange trees, and other specimens of fruit, were much admired. Among many remarkable productions exhibited, we particularly noticed the following: — *H*ibíscus (nova sp.), a species of dwarfy growth and peculiarly proliferous habits; Psoràlea aphýlla, rarely seen so finely in bloom; Wachendórf*ia* paniculàta, with a remarkably beautiful spike of flowers; Sievérs*ia* Péckii, a new species; a seedling rhododendron of Mr. J. Moores, worthy a place in every American department; *Petùnia* Willmore*àna*, a variety between nyctaginiflòra and phœnícea, raised by J. Willmore, Esq., attaining the height of 7 ft., and exhibiting 700 blossoms, the petals of a fine marbled pink colour, with a reticulated tube; azaleas (several varieties) of great beauty, by Messrs. Pope and Sons. A collection of pansies, with which Mr. Brown of Slough favoured the Society, were very fine, many of them new and interesting varieties.

July 3. The collections of pinks exhibited were numerous and exceedingly choice. Mr. Kendall, as usual, took the lead in these as well as in the ranunculuses. These interesting and beautiful flowers were few in number, and by no means fine. We have remarked that the cultivators of ranunculuses, in this neighbourhood, are anything but successful in producing a fine bloom; this, we understood, is to be attributed principally to spring planting being usually adopted in preference to autumnal. The chief difficulty, in management by the autumnal method, is in protecting them from excessive wet and frost, in the months of November and December. When they are well established, a very little shelter is sufficient for them; but, in this case, the time of exhibiting must be at the May, and not the June, meeting. We, however, were gratified by seeing a few specimens sent by Mr. Costor, near Oxford, who has succeeded in impregnating some robust semidouble varieties with the pollen of the old and choicer varieties, that are worn out. The stove and green-house plants were beautiful beyond all expectation; but a collection of seventy-five varieties of heaths, chiefly hybrids, from the collection of J. Willmore, Esq., exhibited at once the spirit and taste of the proprietor, and the talent of his gardener, J. Williams. The roses, owing principally to the late high winds, were neither so numerous nor so fine as on former occasions; but there were some very fine specimens from Mr. Waddell's collection, as well as from J. Gough, Esq., of Perry Bar, the Earl of Bradford, and Mr. Yates of Bordesley. Messrs. Pope and Sons, from the very spirited manner in which they came forward to support the Society, most deservedly stood foremost upon the list of successful competitors; they having gained more honours than any other exhibiters. The remaining prizes were distributed among a great number of persons, showing, most satisfactorily, that the influence of this Society is spreading far and wide. The display of fruits and vegetables, in the lower room, was exceedingly imposing. The melons from Mrs. Taylor, Moseley Hall, and the grapes from Malvern Hall, could not be surpassed, at this time of the year, at any exhibition in the kingdom. Peaches, nectarines, strawberries, cherries, &c., nothing could exceed, especially the two former, from Lady Ward of Himley Hall, who also exhibited an orange tree (the *myrtifòlia*) in the most beautiful state of perfection imaginable. But the most gratifying feature in the exhibition was the positive triumph of labour, perseverance, and skill, over soil and situation; the productions of the neighbourhood of Birmingham having, in nearly all instances, surpassed the produce of the Vale of Evesham. This we record as no ordinary occurrence in the annals of the Society. The cottagers' stand was filled in every way the Society could wish. The fruits, flowers, and vegetables vied with those of the higher classes of contributors; and all parties seemed highly gratified and delighted.

Sept. 18. The attendance at these interesting exhibitions has increased to that degree that the schoolrooms at Bordesley, in which part of the borough the Society originated, and to which it legitimately belongs, have long been found too small for the accommodation of visiters and an advantageous display of the Society's horticultural and floral productions; but we are sorry to say, that, on this occasion, want of room was still experienced, and that, in consequence, many specimens of fruits and flowers were obliged to be placed under the tables, on the floor of the room. The exhibition of georginas was very splendid; Mr. Bourne of Ashted sent a beautiful collection, but it was too late for exhibition. J. Woolley, Esq., Mr. Rushton, and Mr. Cowdry, were among the successful competitors. The unwearied friend of the Society, Mr. Kendall, exhibited a design which formed the segment of a circle, with its base line, on which was inscribed "Warwickshire Floral Society," all in georginas; the whole being surmounted by a crown and W. R. More than 1000 blooms were used for this design, which were placed on the front of the orchestra, and nearly occupied the whole width, adding much to the beauty of the arrangements. A design by Mr. Cowdry, of the figure of a

Harlequin, formed in georginas, standing under an arch of flowers, attracted much attention, from its novelty. The plants exhibited, as might be expected at this season of the year, were not numerous; but many good specimens were among the number. (*Ibid.*, Sept. 25.)

Oct. 15. and 16. The show, considering the advanced state of the season, was of a very superior description. The specimens exhibited were arranged upon three large tables extending along the entire area, which afforded ample room for the most striking and effective display. Two of the tables were decorated with a fine collection of valuable plants and a variety of georginas; the third was occupied with a profusion of choice fruits. The vegetables were placed around upon benches, and were numerous and of excellent quality. Upon no former occasions has there been so much exertion made by exhibiters to vie with each other in extent and variety of specimens produced, and attended with such complete success; for at this season of the year but few house plants are in flower, and those sent incur the risk of being injured from the uncertainty of the weather. John Willmore, Esq., obtained a silver medal for the best collection of well-flowered house plants. A splendid epiphyte, Cattlèya labiàta, from Lord Grey of Groby, attracted general admiration. A fine-flowered specimen of Limnócharis Humbóldtii, in a pan of water, was sent by Messrs. John Pope and sons, who have at various exhibitions shown several fine specimens of aquatics, in the management of which they greatly excel. The group of flowers from Mrs. Woolley, and a pole decorated with branches of apples, drew general notice. Among the culinary vegetables from the Society's gardens were specimens of *S*tàchys palústris and Couve tronchuda; some fruit of Passiflòra edùlis, were also exhibited. A good specimen of New Providence pine was exhibited by Mr. John Horton; and six sorts of seedling apples by James Taylor, Esq., two of which appear likely to be a great acquisition to the dessert apples. Many very beautiful stove and green-house plants were exhibited; principally by John Willmore, Esq., and Messrs. J. Pope and Sons. (*Aris's Birmingham Gazette*, Oct. 20.)

Wiltshire. — *Wilts Horticultural Society. June* 20. This is an annual exhibition. Some fine specimens were shown, and the company was very numerous. (*Bath Herald*, June 28.)

Worcestershire. — *Worcestershire Horticultural Society*. The season has proved so unfavourable to the beautiful tribe of auriculas, that but few of that class were exhibited, many growers having lost some of the finest of their plants. We were pleased to notice that, by a new regulation of the Society, certain prizes are set apart to be contended for by nurserymen only. This brought forth some choice specimens, from Mr. Smith and Mr. Tapp, of both rare and beautiful plants. (*Worcester Herald*, April 26.)

Vale of Evesham Horticultural and Floral Society. — April 17. This show was chiefly remarkable for its auriculas and polyanthuses. By a curious coincidence, Stretch's Alexander won the first prize for the auriculas, and Pearson's Alexander the first prize for the polyanthuses; so that Alexander was truly a "conquering hero." The hyacinths were also very fine, particularly those shown by Mr. Hodges. (*Ibid.*)

May 15. This show "was not so numerously attended as formerly, probably in consequence of a resolution, which the committee thought it expedient to make at the last annual meeting, that no subscriber should introduce more than one friend, and all other persons pay 1*s*. for admittance. We regret exceedingly that the funds of the Society should have rendered such a resolution necessary; and we hope that those ladies and gentlemen who are in arrear to the Society will cause the amount to be immediately paid, and continue their patronage." The prizes were principally for tulips and anemones. (*Worcester Journal*, May 22.)

July 15. One of the most beautiful ornaments in the room was a lofty garland of flowers, arranged in the form of a vase surmounted by an imperial crown, sent by Mr. Tapp. There was a brilliant display of carnations and georginas, and some fine gooseberries. (*Ibid.*, July 14.)

YORKSHIRE. — *Doncaster Horticultural Society. April* 15. The exhibition of vegetables was excellent; and among them were some tubers of the *O'xalis crenàta*, for which a prize was given. The onions and carrots, preserved from the last year, were excellent. There were but few green-house or stove plants, and only a few hardy azaleas. Mr. Appleby exhibited by far the greatest number, and the most beautiful varieties, of plants. (*Doncaster, Nottingham, and Lincoln Gazette*, April 18.)

May 13. The show of plants, flowers, fruit, and vegetables was excellent. The room, which was crowded, was very tastefully decorated; and several remarkably fine portions of cut pink thorns, &c., sent by Lady Cooke of Wheatley, had a very pleasing effect. The show of pelargoniums, azaleas, and calceolarias was remarkably striking; as well as the exotic and hardy bouquets, cut flowers, and the collection of British plants, embracing 156 named species. The exhibition of fruit presented some very luxuriant specimens of cut oranges, from the gardens of P. Davies Cooke, Esq., of Owston. The show of vegetables, too, was extremely good; and, in point of size, much larger than (considering the character of the season) might have been anticipated. Those from the market-gardens of Mr. Milan of Doncaster excited much and deserved admiration, as evincing, in the cultivation, the utmost degree of skill and attention. There were some fine prizes for the tulips given, for which Mr. Fearn, Mr. Short, and Mr. Thorpe were the most successful competitors. (*Ibid.*, May 16.)

July 23. The most striking feature in this exhibition was the splendid show of yuccas, belonging to Messrs. Crowder of the Botanic Nursery opposite Christ Church: they met with universal admiration. The pelargoniums of Mrs. Walker of Wilsic attracted deserved attention; as did also the calceolarias and Fúchsi*a* of Mr. Appleby; and the *Mímulus* of Mr. J. L. Crowther of Bennetthorpe. The show of georginas, too, at this early season, was extensive and strikingly beautiful. The bouquets of Mr. Stone and Mr. Hopkinson, presenting almost every variety of tint, were much admired. The fruits were all excellent. Mr. Mearns (one of the judges), gardener to His Grace the Duke of Portland, exhibited some fine specimens of grapes, the result of his method of coiling vines (one of which was shown, loaded with a crop of fruit); a method which has been attended with the highest success, and which is worthy of general adoption. (See Mr. Mearns's account of his practice in p. 138.) The vegetables, too, were remarkably good; particularly rhubarb, cucumbers, and celery. (*Ibid.*, July 25.)

Oct. 6. As this was the last, so it was by far the best, show of the season. The show of fruit and vegetables was extremely fine. Some of the specimens were astonishingly large: evincing, in the most satisfactory manner, how much can be attained by care and skill in cultivation. The show of georginas, staged next the wall on the right from the entrance, was remarkably splendid, and, in point of perfection and brilliancy of colour, perhaps unequalled: from the palest white, the deepest crimson, the flaming red, and the modest rose, to almost the perfectly black; every shade, in short, except blue. The show of plants, arranged on the opposite side of the room, was far more numerous than (considering the lateness of the season) might have been expected. The eye of the spectator was attracted to the lower end of the room, which was ornamented by a representation of the corporation arms, formed of various coloured georginas; surmounted by a star, and containing, on each side, the letters W. R., also formed of georginas, in different colours. The latter had a very gratifying effect; but the arms were on too small a scale, too diminutive to come within the reach of general admiration. A pyramid of georginas, however, which occupied one end of the centre table, was extremely beautiful. The colours of the respective flowers presented no confusion; and the effect of the whole was very striking. A *fleur-de-lis*, too, at the other end of the table, formed of various flowers, excited much admiration. A self-acting fountain [we should be glad of an account of it, with a sketch], invented and manufactured by Mr. Hopkinson, tinner and brazier

Scot Lane, and placed among the plants at the end of the room, was much admired. The room, at one period, was exceedingly crowded. (*Ibid.*, Oct. 13.)

Gainsborough Horticultural Society.—May 7. The fruits, flowers, and vegetables gave great satisfaction; and the Society promises to produce the most beneficial consequences, by promoting emulation in the production of the useful and ornamental. Sir R. Sheffield, Mrs. Sanders, H. B. Hickman, Esq., and Mr. King appear to have been the most successful competitors. (*Ibid.*, May 16.)

Beverley Floral and Horticultural Society. — *Sept.* 3. The principal room was devoted to the exhibition of the productions of the flower-garden. In the centre of this apartment, in a splendid vase elevated upon a pedestal, stood a beautiful orange tree, bearing fruit, from the green-house of R. Bethell, Esq. M.P. Immediately adjacent to this were four tables covered with exotics and herbaceous plants; among which was an extremely fine Potentílla Hopwoodi*àna*, from the conservatory of R. F. Shaw, Esq. At the upper extremity of the room, where was the official place appropriated to the president, a tasteful arbour was erected, consisting of arches, supported by four columns of cast iron, the work of [our correspondent] Mr. Crosskill, iron-founder, Beverley; and by him most handsomely presented to the Society. From this were suspended rich and glowing festoons of georginas and China asters, edged and contrasted with ivy and fuchsia. Around the columns. flowers of varied hue were entwined; and at the summit shone the word "Horticulture," formed of georginas and China asters, each letter being composed of flowers of uniform colour. The light and elegant appearance of this appropriate embellishment elicited general admiration. On each side of the president's seat stood a fine specimen of the coffee tree, in bearing, sent by Henry Ellison, Esq.; and close adjoining was a splendid fuchsia. Upon the tables we observed a tripod formed of China asters, which had a very good effect. On the left-hand side of the room was a stage containing a brilliant assortment of georginas, from the garden of the Rev. E. W. Stillingfleet of Hotham. Near this was a very beautiful bouquet of rare exotic plants, sent by H. Burton, Esq. M.P. A tray of choice flowers was kindly furnished by Mrs. John Grimston of Neswick. On the other side was a very large bouquet of shrubs and flowers, sent by B. Haworth, Esq. It consisted of 135 species, exclusive of 20 varieties of georginas, at present in flower at Rowlston, within half a mile of the sea. A specimen of maize was near this, grown in the open air in Mr. Haworth's garden. Some Indian corn is now growing on land of Mr. Haworth's at Hornsea, occupied exclusively in spade cultivation. We must not omit to notice several new flower-baskets, manufactured of wire by Mr. Crosskill, which had an extremely neat and pretty appearance; and a pair of ebony flower-stands, mounted with ivory, manufactured by Mr. Nutchey of London. A curious description of marine fungus, called Neptune's Cup, sent by the Rev. F. Best of South Dalton, occupied the centre of the table at the lower extremity of the principal room. (*Hull Advertiser*, Sept. 5.)

[H. Reynard, Esq., the president, made some observations on the georgina, which, he said, ought to be still called dahlia. "The genus was named Dáhl*ia* in honour of Professor Dahl, a Swedish botanist. Some objections were at first made to this name, under an erroneous impression that it had already been appropriated to another genus; and a farther objection was taken to it from the similarity of its sound to Dàle*a*, a genus of leguminous plants so named after our countryman Dr. Dale. The first of these objections induced Professor Willdenow, in his *Species Plantarum*, to apply to these plants a new name; that of Georgì*na*, after Georgi, an eminent Russian traveller and botanist. In this he was followed by M. Decandolle: but the original name seems to be fully established; and is retained in the new edition of the *Hortus Kewensis*, as well as by the botanists [gardeners] of France." It is certainly much to be regretted that a plant in such general cultivation as that alluded to should pass under two different names; but there is no other mode of avoiding cases of this kind than by adhering to the principles and rules laid down by botanists. The objections made to the name Dáhl*ia* were made under a supposed discovery of the fact, that the name Georgìna had been previously applied to the same family of plants: see VII. 716.; and because the laws of botanical nomenclature enjoin the employment of any name first applied, to the exclusion of all others, except where new genera are formed out of old ones. Our authority for adopting the name Georgìna was Mr. Sweet; but, since the above was in type, Mr. David Don has proved to us that the name Dáhl*ia* was applied one year before that of Georg*ìna*, and that therefore, although the latter name has been adopted in the *Dictionnaire d'Histoire Naturelle*, the former ought to be retained. The name Dáhl*ia*, therefore, shall in future be used by us, instead of that of Georg*ìna;* and we thank Mr. Reynard for leading us to reexamine the subject.]

West Riding Horticultural Society. — Sept. 10. Over the chair was a grand arch of flowers, from the centre of which was suspended an elegant star of georginas; and this was surrounded by festoons of the same ornamental flower. Along the sides of the room, against the wall, were festoons of georginas of every hue; which, together with the handsome bouquets at each end of the platform, gave to the whole a pleasing scenic effect. These ornaments were furnished by one of the best friends and supporters the Society has; who spares neither pains nor expense to render these useful exhibitions popular. We allude to Mr. Witham Barratt, nurseryman, of Wakefield, the proprietor of the public botanical gardens at this place; who also sent to the meeting some very fine plants, which we regret not to have room to enumerate. There were many other liberal contributors, whose names want of space also compels us to omit. (*York Courant*, Sept. 11.)

North Riding Horticultural and Floricultural Society.—Sept. 12. We have seldom witnessed a finer display of fruits, vegetables, and flowers. Upwards of forty dishes of grapes were exhibited, all in the highest state of perfection; and among the plants were several very rare specimens from the hot-houses of the Earl of Tyrconnel at Kiplin. Several curious stove plants were also exhibited; and, among the rest, a very magnificent coffee tree, loaded with fruit, from the hot-house of John Hutton, Esq., of Sober Hill, which attracted universal attention. The display of georginas was brilliant in the extreme, more than four hundred of fourteen different classes being ticketed for competition: of these, six from the garden of Mr. Matthew Lamb of Northallerton were unrivalled for delicacy and beauty. The vegetables were in the greatest abundance, and of the first order: one table was entirely filled with useful varieties exhibited by the cottagers in the vicinity of Kiplin, and also in this neighbourhood, for the annual prizes given by the Earl of Tyrconnel, the president of the Society. — *E. L. Northallerton.*

Hull Floral and Horticultural Society. — June 16. There was an exceedingly good display of flowers. The ranunculuses shown were not only numerous, but in very great perfection. The premium flowers were the most splendid of their kind; and we must not omit to notice the large and handsome bouquet sent by Mr. D. Brown. By far the greater number of prizes were gained by Mr. M. Bell. (*Ibid.*, June 20.)

The Rev. W. Herbert has presented eight new species of Gladìoli, and some other fine plants, to the Hull Botanic Garden; to which Mr. Appleby of Doncaster has also given *Rìbes* speciòsum and a collection of pansies. (*Ibid.*)

June 30. This show was principally for pinks; and some very splendid ones were exhibited. The roses were extremely beautiful, particularly the moss roses of different kinds. Mr. Bell obtained a prize for a beautiful white moss rose, which was very much admired. Mr. T. Smithson showed a dish of apples, some of last year's growth, and some of the present year. (*Hull Advertiser*, July 4.)

A most extraordinary circumstance, which is said to have taken place at this exhibition, is mentioned in a letter, signed " An Amateur Florist," in the same paper. It is there stated that a plant of *Petùnia* nyctaginiflòra was exhibited, with bright yellow flowers alternating with the white. On closer examination, however, it was found that the yellow flowers were merely taken from a common *Verbáscum*, and stuck on the glutinous stems of the *Petùnia!* We sincerely hope that this disgraceful trick was practised more in joke than with a deliberate design to defraud.

July 28. This show was principally for pinks and carnations. There were some fine gooseberries and other fruit. (*Hull, Rockingham, &c.*, Aug. 2.)

Sept. 23. This was the last show for the season; and it consisted of georginas, China asters, fruit, and vegetables. The georginas were very perfect, and of the most luxuriant colours: we are much gratified to observe the extreme pains taken to cultivate this splendid flower, which can be obtained in so many varieties. The fruit, especially apples and grapes, was extremely fine. The whole collection was afterwards kindly sent, for exhibition and sale, to the bazaar at the Mechanics' Institute. The company, during the day, was extremely numerous and fashionable; and all expressed themselves greatly pleased with the exhibition. (*Hull Observer*, Sept. 30.)

Leeds Florists' Society. — *June* 23. This show was a very fine one. It was entirely for pinks; and Mr. J. Kearsly was the most successful candidate. (*York Herald*, June 28.)

Whitby Floral and Horticultural Society.—*April* 29. The room was neatly decorated with evergreens, &c., and fitted up in a style well adapted to the reception of the numerous and respectable audience; so that the specimens could be viewed by all, without the least inconvenience or annoyance one to another. The order and taste displayed, in placing the specimens submitted for competition, reflect great credit on the committee and secretary (Mr. M. L. Simpson). The auriculas, polyanthuses, and hyacinths were very beautiful. (*Yorkshire Gazette*, May 3.)

June 24. Owing to the late dry weather, and the consequent unnatural forwardness of the floral season, there were no specimens of ranunculuses or anemones, both being past their prime; but the show of pinks was considered good. H. Belcher, Esq., and several other gentlemen residing in Whitby and its suburbs, are entitled to the best thanks of the Society, for their kindness in furnishing green-house plants to decorate the exhibition room, as, of course, this cannot be done without some little risk to the plants thus furnished. The best pink was Reform; and it was shown by Mr. W. Frankland, jun. (*York Herald*, June 28.)

September Exhibition. Great inconvenience was experienced by the crowd, not half the company being able to obtain a view of the flowers. The president (H. Belcher, Esq.) suggested the idea of having a range of light stands, after the manner of green-house shelves, to run the whole length of the room, but capable of being moved from place to place, made at the expense of the Society, for the better display of flowers, and particularly of georginas; and not only recommended the money at present in the hands of the treasurer being laid out in that manner, but most liberally offered his share of the prize-money towards defraying the expense of the proposed arrangement. There were several specimens of new annuals and other rare cut flowers in the room; as well as one or two green-house plants in pots, principally from the garden of the president. But the georginas were the stars transcendent: of these there were an immense number, which were splendid in the extreme. It is astonishing where they all came from, considering the paucity of gardens and the bleakness of the surrounding country; but it is apprehended that very many, and those the best in the room, were grown by the small tradespeople in the town, in gardens only a few feet square. This is doubly gratifying, and an evident symptom of the refinement of that valuable and important class of society. (*Yorkshire Gazette*, Sept. 13.)

Ripon Horticultural Society. — *April* 25. The show of fruit, flowers, and vegetables (considering the early season) was exceedingly fine. The auriculas, polyanthuses, and pelargoniums were particularly deserving of admiration. (*Ibid.*, May 3.)

York Florists.—*July* 28. This was an annual show for carnations, picotees, and gooseberries. The flowers were particularly fine. (*York Courant*, July 31.)

York Horticultural and Floral Society. — *May* 14. At this show, the tulips and pelargoniums were particularly beautiful. (*Yorkshire Gazette.*)

Sept. 11. There was an extremely fine display of plants, flowers, fruits, and vegetables; and, most of the plants being very rich in bloom, the room presented a charmingly variegated appearance. There were two superb bouquets: one an arch, about 12 ft. high; the other a plateau, beautifully arranged. The first of these was furnished by Mr. Wood, the second by Mr. Holmes. Among the articles which excited great attention were, two orange trees, with their golden fruit pendent from their boughs; a Patagonian gourd, grown by G. Swann, Esq., at Mill Crooks, near York; and a vase of flowers, cut by Mr. Johnson, cook at the Black Swan, from the turnip, carrot, and beet roots. Mr. Johnson imitated nature so marvellously well, as to deceive casual observers; who took his "handyworks" for the veritable productions of Flora. Among the fruit, the show of grapes and apples was good; that of pears meagre: but those which obtained the prizes were large in size, and excellent in quality. There was a very thin show of plums, which have, this year, been a failing crop. The melons were not remarkably fine; and only one pine was exhibited. (*Ibid.*)

Bedale Horticultural Society. — *May* 26. Great taste was displayed in the decoration of the room, under the obliging superintendence of Mr. Hewson, gardener to Miss Peirse, the whole of the walls being covered with branches of the common laurel, numerously interspersed with pæony flowers. This arrangement gave to the interior a verdant gaiety, and grove-like appearance, which comported well with the occasion; and, as it obviated, at the same time, the otherwise unfavourable character of the building, it did not fail to call forth the unanimous approval of all present. (*York Herald*, June 7.)

East Riding Floral and Horticultural Society. — *June* 5. [Only an advertisement of this Meeting has reached us.] (*Hull Advertiser*, May 23.)

The Wakefield Horticultural Society. — *May.* The exotic bouquet, exhibited by Mr. Appleby, gardener to the Rev. J. A. Rhodes, contained a large collection of the most beautiful and superb flowers that grow. Four pots of ericas, from the gardens of Henry Wilson, Esq., of Birthwaite Hall, were most magnificent and superb specimens. The show of pelargoniums, ericas, hot-house and green-house plants was of the first description. The pines were excellent, the largest weighing 5¾ lb.; and the peaches, nectarines, grapes, cherries, and strawberries, such as could not be surpassed at this season of the year. The culinary vegetables were in the greatest abundance, of every variety, and of the most excellent qualities. Too much praise cannot be given to the gardeners for their support of the Society. (*Wakefield and Dewsbury Journal*, May 23.)

July 30. There was an excellent show of vegetables and fruits, but a great falling off in the display of plants and flowers, in comparison with former meetings. The head of the room was ornamented with six splendid bouquets, in imitation of pillars festooned, furnished by Mr. Wm. Barrett, the proprietor of the Wakefield Botanical Gardens; to whom the institution has been for a long time much indebted, for his unwearied exertions to contribute to the popularity of the exhibitions. Several other bouquets were furnished for the decoration of the room. The arrangements did great credit to the curatorship of Mr. Hadfield; and to the indefatigable secretary, Mr. Senior. The room was crowded. The fruit was very fine. The largest pine (shown by Wm. Partridge, gardener to Joshua Ingham, Esq., Blake Hall, Mirfield) weighed 8 lb. 3 oz. Mr. Wm. Barrett sent a great number of fine plants, 12 ligneous calceolarias, 56 herbaceous ones, and 170 varieties of pansies. (*York Courant*, July 31.)

WALES.

Swansea and Neath Horticultural Society. — *June* 19. There were some beautiful flowers in the room, especially pelargoniums. Of the fruit there was a scanty supply, although a few specimens of grapes were superb. Some strawberries, belonging to a cottager at Neath, could hardly be exceeded in size or beauty; and the flowers and vegetables of the cottagers were altogether superior to those exhibited at any former show. There will be an increased interest in the next two shows, from the extra-prizes given by the president to cottagers: for the best cultivated garden, for the greatest number of apple trees planted or grafted, for the greatest number of thriving hives of bees, and two prizes to labourers who have worked the greatest number of years with the same family. Extra-prizes of silver sugar tongs, &c., were given to those gardeners who had won the greatest number of common prizes. (*The Cambrian*, June 28.)

July. The flowering plants were remarkably fine; as was the fruit, of which there was a great abundance. There were ten cottagers' prizes. Of the other prizes, Mr. Dillwyn Llewelyn obtained by far the greatest number; and, according to the regulation mentioned above, his gardener had a silver cream jug awarded to him. (*Ibid.*, Aug. 9.)

August. This show, to all lovers of georginas, was a great treat. The room was honoured by several of the most influential families in the neighbourhood; and the delight manifested at the beauty of the georginas and asters must have been some reward to the exhibiters, for their exertions in obtaining such charming additions to our gardens. We give the names of a few favourite georginas, which were beyond praise: — Barrett's Susanna, Tincta, Le National, Picta formosíssima, Springfield Rival, Harris's Queen, Levick's Incomparable, and Melancthon, which was so black, that, placed by a lady's black gown, there was but a shade between them. If this Society had not existed, when would such a collection of flowers as those exhibited at Neath have adorned the gardens of those who now possess them? and, the more important point, how would the cottager's garden have been improved? The fruit was fine, particularly the grapes, figs, nectarines, peaches, and apples; but there was a great paucity of ornamental plants for the stage. We cannot forbear alluding to a beautiful nosegay of various flowers, with a first prize card on it, awarded to Miss Llewellyn of Baglan Hall. Mr. Maule of Bristol, and his son, gave their assistance as censors (which produced much satisfaction); and, in the handsomest manner, declined the usual fee of two guineas which the Society pays to the censors. The number of plants entered for competition were 450. (*Ibid.*, Sept. 6.)

Glamorgan and Monmouthshire Horticultural Society. — *June* 11. Colonel Morgan presided; and called the attention of the meeting to the rule which requires that persons showing fruit, vegetables, or flowers, for prizes, should declare that they were their property, and of their own growing and blowing; and that they had been two months in their possession at least. Some beautiful flowering plants were exhibited, and some fine fruit. There were several cottagers' prizes. (*Ibid.*, June 28.)

THE CHANNEL ISLANDS.

Guernsey Horticultural Society. — *May* 1. This exhibition was highly creditable to the island; and a number of fine plants were shown from the gardens of Sir Thomas Saumarez, Mr. J. Hubert, Mr. F. C. Lukis, Mr. W. De Jersey, &c. Among the fruit, we noticed some apples of last year, which appeared almost as fresh as if they had just been gathered from the tree. There was a small quantity of strawberries, a few cherries, and some very good gooseberries; an early Battersea cabbage, exhibited by Mr. Collyer, was a most extraordinary one, in point of size, for the season. It is highly creditable to the island, that from one of its cottagers' gardens should have been gathered such a bouquet as that to which the first prize was awarded; containing, as it did, so many valuable and well-grown flowers. We are convinced that the slightest encouragement held out by the Society cannot fail to promote and improve the practice of floriculture among a population which has always evinced a decided partiality for it, throughout all classes, from the highest to the lowest. We hope it will especially tend to make the cottagers careful to select for cultivation only the choicest and most beautiful sorts; a vast number of which, fortunately, require no more attention than the most common. The green peas and early potatoes, for which there were three competitors, were remarkable, not only for their forwardness, but for their appearance and quality. We cannot help noticing, as worthy of particular praise, a bunch of twenty-five heads of asparagus, of the Gravesend variety: we feel warranted in saying that it might challenge competition with any bunch of the same sort ever produced. A double prize was given for this asparagus to the grower, Mr. John Falla. (*Comet*, May 5.)

July 8. This show was still better than the last. The fruit was particularly beautiful and abundant; and the culinary vegetables would have been admired in any county. The cottagers' articles were improved both in quantity and quality. Nearly forty prizes were distributed. (*Ibid.*, July 10.)

Oct. 16. The sizes of several articles which obtained prizes are given below, as interesting to show their respective habits of growth in Guernsey. A prize for six Chaumontel pears, grown against a wall, was awarded to Mrs. Baldock. Among that number, the largest weighed 24 oz., the next 20 oz., and another 16 oz.: these three grew upon the same spur. The other three weighed 46 oz.: making altogether 106 oz. We also noticed six fine Crassane pears, sent in by Sir Thomas Saumarez. Of the six extra-pears, known by the name of the Duchesse d'Angoulême, the largest weighed 21½ oz. We observed, also, six other Chaumontel pears, grown against a wall, weighing 112½ oz.: the largest, 24½ oz.; and the other five, 88 oz.; and six others, very fine, grown out of doors. We remarked, also, as worthy of notice, a fine plate of strawberries (known by the name of Metheven Castle, or Duke of Kent), by Sir T. Saumarez. There were several bunches of beautiful grapes: among which we remarked one of the black Hamburgh, weighing 2 lb. 11 oz.; one known by the name of black Jamaica, weighing 2 lb. 9 oz.; one of the white muscadine, weighing 1 lb. 12 oz.; and the muscat of Alexandria, weighing 2 lb.: the whole of which were sent by Mr. F. Mansell of the Vauxbellets. Among the vegetables there was a string of onions, fifty in number, worthy of notice (the whole weighed together 22½ lb.), the property of Mr. Harry Dobree, jun. A very large parsnep, belonging to Mr. George Foote, attracted our attention; it measured 21 in. in circumference: and, not far from it, we noticed a beet root, appertaining to Mr. Henry Carre, that weighed 24 lb. There were exhibited six fine heads of Cobbett's Indian corn, presented by the bailiff; and Mr. Harry Dobree sent in, also, six heads of Baron Louis's Indian corn, upon one of which we reckoned as many as thirty grains in one row on the length, and twelve rows in the girth. (*Ibid.*, Oct. 17.)

Agricultural and Horticultural Society of Jersey. — *May* 14. This was the first exhibition of the Society in the garden and poultry departments; and the latter was certainly very inferior to what was sanguinely expected. There was a public breakfast, to which about 250 persons sat down. The room was decorated with festoons of flowers; and the exhibition of flowers, generally, was extremely good. The fruit and vegetables were of an inferior description. A mowing machine, and a chaff-cutter with four knives, were exhibited. Mr. B. Saunders, nurseryman, sent between 700 and 800 choice green-house plants, most of which he disposed of. (*Jersey Times*, May 16.)

Sept. 11. The different sorts of georginas that were exhibited were particularly good and splendid; and the flowers from seedling plants, in beauty and perfection, surpassed any we had before seen. There were also several very good assortments of green-house flowers; but the competition in this respect was very limited, owing to the advanced period of the year. The room was very tastefully decorated; and a large anchor, suspended from the ceiling, composed entirely of georginas from Mr. Saunders's nursery garden, excited much admiration. The arrangement of the whole show was almost exclusively conducted by Col. and Mrs. Le Couteur, assisted by Mr. Saunders; and to the excellent taste and kind exertions of Mrs. Le Couteur the exhibiters were much indebted. There was a very creditable display of fruits, especially grapes, morello cherries, pears, and apples. We were disappointed in seeing only one pine, and that not of a size to claim particular merit; but, we understand, it was of excellent flavour. The season was too late to expect much of a show in forced melons; and we observed only two or three, and those not particularly fine. The exhibition for winter fruits will be the most interesting to the Jersey horticulturist, and that is fixed for the 15th of October. Sir John De Veulle showed some very fine peaches; and the pears and apples from his gardens were also good specimens. The show of vegetables was, in our judgment, the most satisfactory part of the day's exhibition. The carrots, parsneps, and onions were particularly good; and three heads of celery that were shown were as fine as any we have ever seen so early in the season. In the list of prizes, we observe the weight of some of the vegetables, two examples of which we shall give, as we have already given some of those of Guernsey: fifty onions weighed 19 lb.; and twelve parsneps, 26½ lb., &c. We were rather surprised to find a list of the charges of a veterinary surgeon appended to the list of horticultural prizes; but this was accounted for, by the Society being for the encouragement of agriculture as well as horticulture. (*Ibid.*, Sept. 9.)

Oct. 15. This was a most brilliant show of autumnal fruits and flowers. The specimens of apples and pears were, perhaps, the finest ever produced; and many deserved particular notice. Some Belles de Jersey pears, of extraordinary magnitude, were placed there by Col. Le Couteur as a present to His Majesty. Some Chaumontel pears were exhibited by Mr. P. Langelier, fifty of which weighed 41 lb.; two weighed 96 oz.; twelve Beurré d'Aremberg, by Mr. James Hammond, weighed 9¼ lb.; twelve Crassane, 7 lb. 14 oz.; twelve Duchesse d'Angoulême, 13½ lb.; twelve Bon Chrétien d'Espagne, 9¼ lb.; and two bunches of out-door grapes, 5 lb. (*Ibid.*, Oct. 17.) [We were sorry to observe no cottagers' prizes mentioned in these accounts.]

SCOTLAND.

Caledonian Horticultural Society. — *Dec.* 6. 1833. The various fruits, flowers, and roots exhibited were never, we believe, surpassed for beauty or excellence; but, owing to the inclement season, and the distance of the exhibition from the city, the attendance of company was less than usual. It has, therefore, been suggested that the winter meetings of the Society should, as formerly, be held in town. Among the prizes was one for a collection of pears, produced from grafts obtained from the experimental garden, which appeared to the committee so uncommonly fine, that they thought it right to award an extra medal for them to Mr. John Young, gardener to Sir James Gibson Craig, Bart., of Riccarton. The secretary exhibited several large blanched specimens of the prickly cardoon, or Cardon de Tours, from the garden of Thomas Guthrie Wright, Esq., Duddingstone Cottage; and stated that the blanching had been accomplished by using hypnum moss in place of straw ropes, the former material being preferable, as communicating no bad flavour to the cardoon. He added, that the committee regarded this as a meritorious practice, deserving of attention; and recommended that a medal should be awarded to Mr. John King, gardener to Mr. Wright; which was agreed to. The Society having offered a premium for the best collection of seeds of evergreen trees and shrubs saved in Scotland, the committee reported that it was due to Mr. John Street, gardener at Biel; who had sent a parcel containing considerable quantities of common laurel, Portugal laurel, and laurustinus, with small quantities of the seeds of Chinese arbor-vitæ and sweet bay. Very fine bunches of black Hamburgh and white muscadine grapes were then placed on the table; the produce of a flued wall at Erskine House garden, without the aid of glass, and gathered on the 4th inst. A letter from Mr. George Shiells was read, mentioning that the family had been supplied with such grapes since the end of October; and that there were still about thirty bunches remaining. The committee, lastly, called the attention of the meeting to several excellent articles, both fruits and roots, the produce of the Society's experimental garden; and which did great credit to Mr. Barnet as a cultivator. A communication was read to the meeting on the forcing and blanching of

Buda kale, by Mr. James Mackintosh, gardener at Archerfield. The kale is planted in boxes, which are introduced successively into the mushroom house; where the kale is at once forced and blanched (light being excluded), while the production of mushrooms is not interrupted. (*Edinburgh Advertiser.*)

March 6. 1834. Only one competitor having appeared under each of the heads of China roses and pears, the committee did not feel themselves warranted to award a medal to either; and there was no competitor for the prize offered for early cucumbers. These defects, however, were considered as amply compensated by the excellence of the actual productions, particularly of some seedling camellias; one of which, raised at Woodhall, by Mr. Robert Denholm, under the direction of his predecessor, the late Mr. Walter Henderson, was very much admired: and, of the culinary articles, a parcel of blanched rhubarb stalks, upwards of 3 ft. in length. These latter were the produce of Seacliffe garden; and, though no medal was offered for such produce, the Society took occasion to mark their approbation to the grower, Mr. Arthur Calder, gardener to John Sligo, Esq., and requested him to communicate an account of his mode of forcing. Specimens of a pear, from Hopetoun House garden, excited much curiosity from the singularity of its history. The tree, which grows as a standard at Hopetoun, had produced abundantly for several years, but its fruit was always hard, gritty, and disagreeable to the taste; until this season, when it has become melting, and of agreeable flavour. Thanks were voted to Mr. James Smith for this production; and he was requested to continue to observe the tree and its produce, and to communicate the history of the fruit, as far as can be ascertained. (*Ibid.*)

Horticultural Exhibition. — June 5. This show was a very good one. The calceolarias from Comely Bank, and the plants from the botanic garden, &c., were very much admired. At the experimental garden, a seedling grape, resembling the royal muscadine, but ripening some weeks earlier, raised by Mr. Taylor, gardener to the Earl of Dunmore; a most extensive collection of species of the genus *I'ris*, from Mr. Forester, gardener to D. Falconar, Esq., of Carlowrie; a new species of Testudinària, lately imported by Mr. Lawson, seedsman; a collection of fine green-house plants, from Mr. Henderson, Trinity Cottage; sweet peas in flower, which had been treated as biennials, from Mr. Guthrie Wright, Duddingstone Cottage; and admirable specimens of the Gros Asperge of Holland, from Mr. Bell, gardener to Mr. Wallace of Newton Hall. All excited great interest. An elegant vase, and two ornamental flower-pots, manufactured from the fine fire-clay lately discovered at Garnkirk, were exhibited, and much admired. (*Ibid.*)

AYRSHIRE. — *Kilmarnock Horticultural Society. Sept.* 12. and 13. The walls of the room were tastefully hung round with wreaths of evergreens and flowers; the passages were ornamented with eight smaller and two very large arches of evergreens and flowers, from which hung bunches of grapes, pears, plums, and other fruits; and a great quantity of fine stuffed birds from Mr. Charles Russel, very appropriately placed, heightened the effect. The chandelier was ornamented with two very large and splendid leaves of the banana tree. The orchestra was completely concealed by evergreens; and beautifully ornamented by a large and splendid structure, much admired and richly ornamented, denominated the Temple of Flora, executed by Mr. Laing of Messrs. W. and T. Samson's nursery. A large model of Caprington Castle, executed by Mr. Isaac Buchanan, flower-gardener there, richly ornamented with heath and flowers, attracted much admiration; as did also two figures, models of the Town House and Burns's Monument, neatly executed and richly ornamented by Mr. Wm. Nesmith and Mr. Wm. Wallace, gardeners in the employ of Messrs. Fowlds and Lymburn; also a cone of evergreens, richly ornamented with flowers, by Mr. John Dunlop of the same establishment. A most ingenious device was displayed by Mr. Archibald Smart, foreman to Messrs. W. and T. Samson, of the flowers of the double white camellia, so neatly cut out of a turnip as to deceive practised eyes, had the present been the season of flowering. The tables were covered with a splendid display of flowers, fruit, and vegetables. Among the names of the different contributors to this annual exhibition, which we regret that we have not room to insert, we select the following, because the size of two of the articles mentioned is distinctly stated: — Mr. Campbell's gardener at Netherplace exhibited some fine seedling apples, from North America; very fine bon chrétien pears and magnum plums; a large pumpkin, 18½ lb.; fine georginas, and many fine specimens of other flowers; very fine onions and leeks; and a branch of an Irish yew tree, from a plant growing in Mr. Campbell's garden, the trunk of which is 6 ft. 1 in. in girth, 20 ft. 4 in. high, and 66 ft. 3 in. in circumference. There is also another plant in the same garden, very little inferior. (*Kilmarnock Journal*, Sept. 26.)

DUMFRIESSHIRE. — *Dumfries and Galloway Horticultural Society.* The display of fruit was finer and larger than usual; and included pine-apples grown at Drumlanrig, splendid grapes and jargonelles from the same demesne, and a variety of the choicest articles from other quarters. The hall was tastefully decorated with flowers; some of them woven into the shape of crowns, and others rising in the form of a pyramid, which actually overshadowed the members of the committee when seated round the bar. Among the former, we observed a beautiful bouquet of herbaceous flowers, the gift of Mr. Hennay, the effect of which was augmented by its comparative rarity. [We regret not having room to insert more particulars of this very interesting exhibition; but one article we must not omit to mention.]

A plan of an ornamental and kitchen garden, with surrounding walks and grounds most tastefully disposed, was produced by the youthful horticulturist at Kirkmichael. This plan was carefully inspected, and the design and drawing much admired: it is to be transmitted to Mr. Loudon, for insertion in his Magazine. [We have received the plan, and intend to give it an early place in the Magazine.] (*Dumfries and Galloway Courier*, Sept. 17.)

FIFESHIRE. — *St. Andrew's Horticultural and Floral Society. April* 28. 1834. The first meeting for 1834 was held in the Town Hall here, which was granted by the magistrates, free of expense. A more brilliant display of fruits, flowers, and vegetables we have seldom witnessed at this season of the year. Besides the articles for competition, there were exhibited, from the garden of John Small, Esq., Priory, a fine specimen of Richárd*ia* æthiópica, a large Hydrángea in full flower, some ripe strawberries, and early Albany kidney potatoes from the open garden; from the garden of Major Playfair of St. Leonard's, a lot of early peas in full pod, some fine camellias, and early double tulips; from the garden of the late Mr. Binny, a fine collection of spring flowers, and excellent sulphur broccoli and carrots; by Mr. W. Erskine, some excellent dessert and baking apples, and very large Altrincham and scarlet horn carrots; also some beautiful auriculas, from the garden of Mrs. Glass, Abbey Park. The bouquets of flowers were numerous, large, and varied. Auriculas, polyanthuses, primroses, tulips, anemones, and wallflowers were very fine. Mr. Bousie, writer, gained the first prizes for auriculas and polyanthuses; Mr. Low, upholsterer, for the double hyacinths; Mr. M'Kenly, gardener to Mrs. Cheap of Strathtyrum, for polyanthus narcissus, single anemones, hardy spring flowers, asparagus, leeks, celery, beet root, apples, and bouquet of flowers; our correspondent, Mr. Smith, gardener to John Small, Esq., Priory, for the cucumber, broccoli, sea-kale, rhubarb, and carrots. Second prizes were gained by Mrs. Dr. Cook, for auriculas and carrots; by Major Playfair, for bouquet of flowers and leeks; by Mr. M'Kenly, for polyanthus, broccoli, sea-kale, and rhubarb; by Mr. Smith, for asparagus; and the first prize for cottagers' leeks was won by David Scott, shoemaker. (*Fifeshire Journal*, May 3.)

June 2. The show was altogether very elegant; and, though the gaudy tulip family was nearly wanting, still the Society have much reason to be proud of this exhibition; and it is gratifying to be able to state, that, since the last meeting, there has been a large accession of members, both from the upper walks of life and from operative gardeners. (*Fife Herald*, June 5.)

Sept. 8. A more rich and splendid exhibition has rarely been seen. To pay a just tribute to each individual production would exceed our limits; but there were some which to pass over without notice would be unpardonable. The grapes, for instance, were allowed to be most excellent, both in flavour and size of berry and bunch. The georginas, also, were particularly splendid, especially those from Strathtyrum and Balcarres; the former of which produced 160 new varieties from seed of this king of flowers. The culinary vegetables were quite astonishing in their proportions. The standard pears and apples from Clayton were very much admired; and we would recommend all those interested in the acclimatising of the tender and finer sorts of fruit to visit that place. We observe that Mr. M'Kenly, gardener to Mrs. Cheap of Strathtyrum, gained several prizes; and that Messrs. Urquhart and Sons, nurserymen, of Dundee, exhibited a fine collection of double georginas, some of them striped. (*Fifeshire Journal*, Sept. 20.)

Kirkaldy Horticultural Society. — *Sept.* The judges particularly noticed a collection of French marigolds, from Mr. Ewing's nursery at Balgonie; a collection of China asters, lobelias, and phloxes, from Mr. Tough's nursery; 130 splendid georginas, from the Earl of Rosslyn's garden, exhibited by Mr. Oliver; and 112 beautiful hollyhocks, from the same place; a collection of georginas, from Mr. Sang's nurseries; a collection of pears, from Mr. Oliver; twelve Longueville pears, weighing half a pound each, from a standard tree in Mr. Paton's garden, Dysart, which, this season, has produced 800 lb.; a collection of apples, from standard trees upwards of a hundred years old, belonging to Mr. Watt, Balbarton, by Mr. Tough; a beautiful collection of georginas, from Mr. James Kellock, gardener at Gogar House; a very fine cockscomb, from Mr. Temple, gardener, Falkland Palace; a specimen of Indian corn at maturity, about 8 ft. high, from Mr. Sang's nurseries; very fine specimens of black Gibraltar grapes, from Mr. Simson, Wemyss Castle; a specimen of longpod bean, having seven beans in each pod, from the Rev. Mr. Brodie, Monimail; a collection of antirrhinums, from Mr. David Colville; three large green Leadington apples, from Mr. Peter Kidd, Burntisland; and a basket of very fine red alpine strawberries, from Mr. Bell, gardener at Newton Hall. Among the prizes, we can only find room for the following; the first of which we consider more especially well worthy of being recorded: — Mr. Archibald Reekie, apprentice in Mr. Sang's nurseries, Kirkaldy, for the best herbarium, containing about 1080 species of plants arranged in natural orders. Extra-prizes were also awarded to Mr. James Kellock, for twelve beautiful China asters; and to Mr. Temple, gardener, Falkland Palace, for a fine sample of onions, the growth of 1833. (*Ibid.*)

Collingsburgh Horticultural Society. — *Sept.* 9. The display of fruits, flowers, and vegetables was inferior to none in Fifeshire. There were three cottagers' prizes awarded; viz. for the best collection of flowers, best six onions, and the heaviest two savoys, to James Purves, gamekeeper, Largo House. A splendid collection of georginas, from the nursery of Mr. Sang, Kirkaldy, excited general admiration; and fine specimens of Coe's golden drop, and other varieties of plums. Among the articles shown, but not for competition, were, a cucumber, 27 in. in length, by Mr. D. Brewster; a collection of flowers, and some fine specimens of pears and plums, by T. Stewart, Largo House; and a handsome bouquet of flowers, in the form of a cottage, by Mr. John Braid, gardener, Pitcorthie. (*Ibid.*)

RENFREWSHIRE. — *Glasgow Horticultural Society, July* 9. To those interested in the culture of what are denominated florists' flowers, the extensive display of double pinks demanded minute examination. To the more general floriculturist, the rich and varied beauties of the pelargoniums attracted admiration; while they much regretted the non-portability of the calceolarias, many of which having dropped their flowers in the attempt to bring them forward for competition: those from Bothwell Castle were much admired, even in their partially denuded state. We, in common with other amateurs, were much disappointed at the meagre display of green-house plants, considering the number of members who have it in their power to make a more splendid exhibition. Some, however, we know, were deterred doing so, from the difficulty of transmitting large plants from a distance; and who, probably, from a mistaken notion that their excellent collections at home might suffer in the estimation of the public, would not bring forward any thing of third or fourth rate excellence, which their numerous exhibitions of cut flowers of rare plants sufficiently testify. Still, there were shown some very well-grown mottled and striped double balsams; but which, we should presume, were considered by the judges to come more under the denomination of tender annuals than green-house plants. The culinary vegetables were very good; some of the cauliflowers measured 26 in. in circumference. (*Glasgow Weekly Reporter*, July 12.)

Sept. 17. This show was of the most brilliant description; and the room was filled with beautiful specimens of all kinds, from nearly all the noblemen's and gentlemen's seats in the neighbourhood. Our only regret was, that the hall was too small for the numerous assemblage of amateurs, and particularly for the convenience of the ladies, to inspect the show with ease and comfort. In this exhibition we must notice a rustic chair, made by Mr. Wm. Cameron, gardener at Barncleugh, near Hamilton; which was acknowledged, on all hands, to be a highly meritorious specimen of art, uniting elegance of shape with firmness and strength: it was constructed of branches and roots of oak, elm, birch, alder, and apple. Miss Tennant's artificial flowers in wax, three of which, viz. a camellia in a pot, and two hyacinths with their roots in glasses, stood on the table; vying, in their close resemblance to nature, with all the real flowers around. (*Glasgow Free Press*, Sept. 20.)

STIRLINGSHIRE. — *Stirling Horticultural Society. April* 29. The auriculas formed the principal attraction at this meeting; and Mr. Ninion Niven, gardener to Archibald Stirling, Esq., of Keir, was the most successful candidate. The plan of a flower-garden, by John M'Kenzie, journeyman gardener at Blair Drummond, excited considerable attention. Many fine green-house and stove plants were sent from the collections of the nobility and gentry in the neighbourhood. (*Stirling Journal*, May 2.)

June 3. This exhibition was principally for tulips, pelargoniums, and heartsease; and some very fine specimens were exhibited. Among the most interesting articles were some apples, preserved by being pitted in the earth in the same manner as potatoes, and some preserved in a moderately dry loft, the fruit being intermixed with straw: both were in excellent condition. There was also a model of a flower-garden, upon wood, by James Henderson, apprentice gardener at Alva House. Among the articles shown by the Messrs. Drummond were some tubers of the *O'xalis crenàta*. (*Ibid.*, June 6.)

Sept. 16. This was the last competition for the year, and we are happy to state that the exhibition was, for richness, variety, and arrangement, such as never had been witnessed under the auspices of the Society since its establishment in 1812, clearly marking the progress of improvement, and reflecting the greatest credit on the patrons and directors, but especially displaying increasing zeal and enthusiasm on the part of the many intelligent operatives connected with it. Although many of the competition and exhibition articles are worthy of being particularly singled out for their excellence, want of room forbids our enlarging on them; but we cannot help expressing our admiration of the very ingenious and tasteful manner in which the bouquets of hardy flowers were got up, several of them forming elegant and fanciful architectural designs; the whole, or chiefly, being the workmanship of juvenile gardeners. We would strongly urge our youthful friends to persevere in such attempts, and to endeavour to improve their taste in every department connected with their interesting profession. (*Ibid.*, Sept. 19.)

Falkirk Horticultural Society.—April 26. The peculiar and high excellence of all the articles competed for, and especially the florists' flowers, many of which evinced great perfection, was marked and striking; while the fruits and vegetables showed what can be effected by the cultivators of this pleasing and useful art. No competitors appeared for anemones, primulas, cucumbers, or mushrooms. Mr. Ingram, gardener at Parkhill, produced fine seedling apples, which excited much attention, from their combination of good qualities. (*Ibid.*, May 2.)

May 30. The tulips were remarkably fine, and excited very great admiration: a manifest improvement was observed in these flowers since the last time any were shown. We may notice the superb collection of exotics from Callendar House, combining great beauty and rarity; and the very large heads of Indian corn. Mrs. Walker sent from Camelon House some plants of the more delicate ericas, which were much admired. A large and remarkable specimen of the Coccóloba uvífera was exhibited by Mr. James Miller, and a basket of preserved apples by Mrs. Keir. [An allusion is made to a previous number of the *Stirling Journal*, in which the process adopted by this lady is detailed: not having seen that paper, we should feel very much obliged if Mrs. Keir, or any of her friends, would give us an account of her method.] (*Ibid.*, June 6.)

Sept. 12. The peaches and nectarines were very fine. The vegetables were very good; especially the gourds, and among others was a giant gourd 4½ ft. long. The georginas were very beautiful. (*Ibid.*, Sept. 19.)

IRELAND.

Horticultural Society of Ireland.—*Jan.* 2. This was a private exhibition of pears, apples, and grapes, for which prizes were given. Some of the fruit was fine, the apples in particular, but they were only of common kinds, there not being a single specimen of any of the newly introduced and finer varieties. Many discrepancies appeared in the nomenclature of both apples and pears, and the Society have determined to get models made of well-ascertained fruit, for gardeners to have recourse to, for the purpose of verifying names. Only three bunches of grapes were exhibited. A very empyreumatic, but strong, spirit, distilled from the mangold wurtzel, was presented by the assistant secretary, Mr. Pooler. (*Irish Farm. and Gard. Mag.*, Feb. 1834.)

Jan. 16. An examination was held in Botany and Horticulture, for the purpose of awarding premiums and certificates to young gardeners. Only three young men offered themselves, and the first prize was gained by Mr. Russell from the College Botanic Gardens. All the young men acquitted themselves very creditably. (*Ibid.*)

April 24. A collection of plants of extraordinary merit was sent from the College Botanic Gardens; but the stove plants entered for competition, and the fruit, were by no means equal to what they have been heretofore. The heaths and other green-house plants were particularly fine and well flowered. The culinary vegetables were excellent. (*Ibid.*, May.)

May 15. Dr. Plank, and A. B. Crofton, Esq., were the most successful competitors for tulips, and Mr. Keefe, nurseryman, for pelargoniums. Among the green-house plants sent by Mr. Niven, was a new hybrid epiphyllum. A fine spike of flowers of B*á*nks*ia* marcéscens was among the articles sent by Mr. Mackay from the College Botanic Gardens. (*Ibid.*, June.)

June 19. The number of plants, both from private gardens and nurseries, was very great, and some of the specimens were very beautiful. Among the new plants was a new Passiflòra álba, shown by Messrs. Toole, and a new double purple rocket, by Messrs. Simpson. Mr. Mackay sent as usual some beautiful specimens, among which were some extremely fine new calceolarias, raised from seed by Messrs. Dickson of Chester. The committee presented Mr. Mackay with a handsome piece of plate, to mark their sense of his liberality in declining to compete for prizes, and yet sending so many fine plants to the exhibitions. Mr. Lumsden, gardener to Isaac M. D'Ollier, Esq., exhibited some fine native oranges, the produce of a tree which had supplied that gentleman's table during the past year with some hundreds of fruit, of a quality rarely equalled in this climate. Specimens of *P*hórmium tènax (New Zealand flax), were exhibited by Mr. M'Cabe, gardener to the Right Hon. William Saurin; an unusually large purple stock, by Mr. Kelly, gardener to Col. Conolly, M.P.; and a cherry tree 10 in. high, bearing 24 ripe fruit, by Mr. Dumphy of Malahide. (*Evening Mail.*)

Aug. 1. The fruit was not very abundant, but there was a good show of plants in pots, though we did not observe any new specimens.

Sept. 11. The peaches were abundant and fine, as were the georginas. The other fruit was not remarkable.

CONNAUGHT.—*Connaught Horticultural Society. Aug.* 12. Some very fine grapes were exhibited; a bunch, shown by Mr. John Bradshaw, gardener to Lord Clonbrock, weighed 5 lb. 6 oz. The largest melon was that shown by Mr. John M'Gregor, gardener to the Archbishop of Tuam, which weighed 7 lb. 4 oz. The largest gooseberries were those shown by Mr. Bradshaw; they were red, and twenty of them weighed 18 oz. "We are happy to add, that several premiums were given for the superior cultivation of cottage gardens, and that the main object of the Society, namely, the encouragement of useful horticulture among the humble classes, was found to have greatly advanced during the present season." Eight cottagers' prizes were distributed, of which Francis Quinn gained two. (*Connaught Journal.*)

LEINSTER.—*Kilkenny Horticultural Society. Jan.* 31. The mushrooms exhibited by Mr. Carrigan, gardener to the Marquess of Ormonde; the forced asparagus and sea-kale, by Mr. Monk, from the gardens of the Bishop of Ossory; and the broccoli, by Mr. White, gardener to the Countess of Dysart, attracted particular attention, and were admitted to be very superior. The royale d'hiver pear, and the fruit of the *Psídium Cattleyànum*, or Chinese guava, were also exhibited from Mr. Robertson's garden, along with a specimen of guava jelly, the produce of the latter. This rare preserve and sweetmeat is generally imported from the Indies, but may be abundantly prepared from our own conservatories, the tree being a hardy and prolific bearer; the fruit is of the size and colour of an Orleans plum. "Mr. Robinson also distributed tubers of the *O'xalis crenàta*, about the size of a walnut, and resembling, in shape and appearance, a potatoe, combining the flavour of that root with those of the sweet chestnut and artichoke. Being very productive and easy of culture, it may form a pleasing addition to our supper dishes; but to suppose, with some, that it will ever rival the potato in value, is absurd." From Mr. M'Craith's nurseries, and Mr. Robertson's gardens, were also exhibited some rare and beautiful exotics in flower. (*Kilkenny Journal*, Feb. 5.)

May 1. Among the fruits there were some splendid shaddocks and oranges, grown by J. Kiely, Esq., of Ballysaggartmore, county of Waterford, and we regret that there was no prize for them: indeed, the rarity of the former is such, in the country, that nothing of the kind was expected. The gardener of Mr. Congreve, Mount Congreve, obtained most deservedly a prize for full-grown grapes, which must have cost him considerable trouble in forcing. He also exhibited remarkably well-grown cucumbers and cauliflowers. Mr. Reecks (Mr. Wandesford's gardener) produced a dish of peas in very good preservation, also very excellent French beans, for which we regret no prize had been given. There was an admirable show of apples: those of the Bishop of Ossory obtained the prize; but there were some from Dysart, Mr. Robertson's nursery, the Marquess of Ormonde's, &c., remarkably good. The vegetables were of a superior description. Our most esteemed one, the potato, in particular; three samples of which were so very nearly alike, that the judges drew lots, and Mr. Power's gardener, of Kilfane, was the fortunate person. The prize for cabbages was also adjudged to the same person. A dish of superior mushrooms was exhibited by Mr. Carrigan, gardener to the Marquess of Ormonde, for which a prize was awarded; and some beautifully blanched rhubarb, grown at Jenkinstown, obtained a prize. The display of flowers and exotics was grand. The auricula prizes were adjudged to the gardeners of the Ladies Patronesses, and were first-rate flowers. An admirable set of first-rate hyacinths were shown by the Jenkinstown gardener and Mr. Kilrey: the prize was awarded to the three Jenkinstown plants, although two of them were much faded; but the kinds were so magnificent, that they must have been chosen out of a lot of the primal flowers. The judges regretted they could not also give Mr. Kilrey a prize, as a blue double hyacinth of his was a most superior one, and his white and red very good. Mr. Kilrey's tulips and anemones were the best, and obtained prizes. (*Kilkenny Journal*, May 7.; and *Kilkenny Moderator*, May 7.)

Wexford Horticultural Society.—June 1. The attendance was numerous and respectable; and, considering the infant state of the Society, the show of fruits, flowers, and vegetables, far surpassed the expectations of every individual present. The stage presented a beautiful appearance, ornamented with the rarest and most valuable plants, particularly those from the garden of H. K. G. Morgan, Esq. (*Irish Farm. and Gard. Mag.*)

Meath Horticultural Society.—June 19. Premiums were adjudged to Mr. Alexander Stewart, gardener to J. L. W. Naper, Esq., of Loughcrew, who also obtained the medal of the Society for having gained the greatest number of premiums during the past year. Premiums were also distributed for fruits, flowers, and culinary vegetables; and for the following early productions, which were sent to the secretary on the day given as a date to each:—May 5. Good early potatoes, from Mr. P. Dorey, gardener to A. H. C. Pollock, Esq., of Mountainstown. May 28. Dish of shelled peas, from R. Rothwell, Esq., of Rockfield. May 31. Melon, from H. O'Reilly, Esq., of Newgrove. (*Ibid*, July.)

MUNSTER.— *Waterford Horticultural Society. Aug.* 13. The long table of fruits, so rich in hue, and displaying so much luxuriant beauty, that ran along the hall, had a most gorgeous appearance, interspersed as they were with numerous bouquets of splendid cut flowers. Amongst the fruits we particularly noticed several splendid pines from Curraghmore, Ballysaggartmore, Woodstock, and Belmount House. The prize pine was particularly fine, and weighed nearly 7 lb. The grapes also were very fine; the prize bunch (muscat of Alexandria) weighed upwards of 5 lb. There were several hot-house and green-house plants from Woodstock; but, perhaps, the most ornamental article in the rooms was a magnificent collection of georginas from the Waterford nursery. An extra-prize was awarded for a glass of honey sent in by the family of Anthony Jackson, Esq., of Sweetbriar Lodge, in Newtown suburbs. This article was the theme of general admiration for its extreme purity. The bees were kept in boxes and glass hives, somewhat similar to those of Mr. Nutt, an invention of Mr. Thomas Jackson, now an eminent architect in Belfast. (*Waterford Mirror*, Aug. 16.)

Limerick Horticultural Society.—We find from the *Irish Farmer's and Gardener's Magazine*, that a Society has been recently formed in this city, but we have not yet seen any accounts of its meetings. We rejoice, however, in its commencement, and most cordially wish it success.

ULSTER.—*Belfast Horticultural Society. April* 15. The hyacinths and auriculas were very much admired, and very deserving of admiration; and the plants in pots, roses, fruit, and culinary vegetables were very good. (*Belfast News-Letter.*)

June. This show was excellent, and superior to what we have seen for many years. The fruits, culinary vegetables, and flowers were all so good, that it was difficult to decide which was best. The Society has already led to a decided improvement in garden cultivation in the north of Ireland. (*Ibid.*)

Sept. 10. The georginas were remarkably fine, as were the cockscombs and balsams. The ericas were also very fine, particularly those of Mr. Arbuthnot Emerson. The best pines were those of Mr. Lewis, gardener to Col. Forde of Seaford, and the best grapes those of Mr. Walker, from Purdy's Burn, who also showed some fine melons. (*Belfast Guardian.*)

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